



# Floriculture (01.0632) (District)

Granite Technical Institute > 2016-2017 > Intermediate > Agricultural Education > Floriculture (01.0632) (District) > Gowans, Kristina; Hartley, Devon

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Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
<b>FFA/SAE</b> (Week 1, 3 Weeks)	UT: CTE: Agricultural Education  UT: Grades 9-12 Animal Science I Standard 1 Students will explain the role of FFA in agricultural education.  Objective 1 Discuss the history and organization of FFA as it relates to the complete program of agricultural education. a. Explain the interrelationship of classroom and laboratory instruction, supervised agricultural experience, and FFA. b. Describe how, when, and why FFA was organized. c. Identify key FFA historical events. d. Identify the mission and strategies, colors, motto, emblem and parts of the emblem, and organizational structure of FFA. e. Recite and explain	What is the FFA? What opportunities does the FFA have for you? What is an SAE? How many different types of SAE's are possible for you?	<u><b>FFA</b></u> <ul style="list-style-type: none"> <li>History dates (1928-1988)</li> <li>Official Dress</li> <li>Degrees</li> <li>Membership</li> <li>Creed</li> <li>Program of Activities</li> <li>Supervised Agricultural Experience</li> <li>Officers</li> <li>Emblem</li> <li>Mission Statement</li> <li>Motto</li> <li>FFA Salute</li> <li>Career Development Event</li> <li>Members Part</li> <li>FFA Colors</li> </ul> <u><b>SAE</b></u> <ul style="list-style-type: none"> <li>Exploratory</li> <li>Entrepreneurship/Ownership</li> <li>Placement</li> <li>Research/Experimentation</li> <li>Awards available</li> </ul>	<u><b>FFA</b></u> <ul style="list-style-type: none"> <li>Present the FFA Creed</li> <li>Present the FFA Motto</li> <li>Present the FFA Mission Statement</li> <li>Present the FFA Members Part</li> </ul> <u><b>SAE</b></u> <ul style="list-style-type: none"> <li>Design and implement an effective SAE</li> </ul>	FFA Career Development Events Creed SAE Program of Activities Exploratory Entrepreneurship/ Ownership Mission Statement Greenhand Chapter State American Official Dress	<b>FFA Test Summative: Test: Written</b> <b>FFA Creed Common: Oral: Presentation</b> <b>FFA Officer Quiz</b> <b>Formative: Test: Written</b>

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	<p>the meaning of the FFA Creed.</p> <p>f. Discuss the meaning and purpose of a program of activities and its committee structure.</p> <p>g. List FFA chapter officers, and discuss the role of each.</p> <p>Objective 2 Identify opportunities in FFA.</p> <p>a. Describe FFA opportunities that develop leadership skills, personal growth, and career success.</p> <p>b. Summarize major state and national activities available to FFA members.</p> <p>Objective 3 Describe FFA degrees, awards, and career development events (CDEs).</p> <p>a. List and explain the FFA degree areas.</p> <p>b. Identify FFA proficiency awards.</p> <p>c. List and discuss various team and individual CDEs.</p> <p>Standard 2 Students will explain the role of supervised agricultural experience (SAE)</p>					

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	<p>programs in agricultural education.</p> <p>Objective 1 Examine the responsibilities and benefits associated with an SAE.</p> <p>a. Explain the meaning and benefits of supervised agricultural experience.</p> <p>b. Explain the characteristics of an effective SAE program and the responsibilities of those involved.</p> <p>Objective 2 Determine the types of SAE programs.</p> <p>a. Compare entrepreneurship SAEs and placement SAEs.</p> <p>b. Describe research/experimentation on SAEs.</p> <p>c. Describe exploratory SAEs.</p> <p>Objective 3 Plan an SAE program.</p> <p>a. Identify the steps in planning an SAE program.</p> <p>b. Describe the function of a business/training plan and/or agreement in an SAE program.</p> <p>c. Develop a short-</p>					

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	<p>range plan and a long-range plan for an SAE program.</p> <p>d. Relate classroom and laboratory instruction to an SAE program.</p> <p>Objective 4 Maintain and use SAE records.</p> <p>a. Explain the importance of keeping records on an SAE program.</p> <p>b. Explain how SAE records are organized.</p> <p>c. Follow approved procedures to make entries in SAE records.</p>					
<p><b>Safety</b> <i>(Week 4, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 4 Students will demonstrate greenhouse crop production techniques.</p> <p>Objective 11 Discuss pest management techniques.</p>	<p>Are greenhouses dangerous? Are there rules in greenhouses? Are there universal rules or are they designed for each greenhouse?</p>	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Dangers</li> <li>• Hazards</li> <li>• Personal Protective Equipment</li> <li>• Eliminating Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will demonstrate use of PPE</li> <li>• Students can identify Safety, Danger, and Hazards in a work environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Safety</li> <li>• Caution</li> <li>• Danger</li> <li>• Hazard</li> <li>• Personal Protective Equipment</li> <li>• Safe</li> <li>• Accident</li> <li>• Harm</li> </ul>	<p><b>Safety Test Common: Test: Written</b></p>

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	<p>a. Identify categories of pests (e.g., weeds, insects, fungi, etc.).</p> <p>b. Explain best management practices while maintaining environmental integrity.</p> <p>c. Discuss alternative pest control techniques.</p> <p>d. Demonstrate safe practices in selecting, applying, storing, and disposing of chemicals.</p> <p>e. Explain integrated pest management (IPM).</p>					
<p><b>Intro to Horticulture</b> (Week 4, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 6 Students will explain greenhouse business concepts.</p> <p>Objective 3 Describe greenhouse business management.</p> <p>a. Differentiate the</p>	<p>What is horticulture? Does it involve all plants or just plants in the greenhouse? Is horticulture a growing industry or a decreasing industry?</p>	<ul style="list-style-type: none"> <li>• Horticulture</li> <li>• Floriculture</li> <li>• Landscape Design</li> <li>• Pomology</li> <li>• Olericulture</li> <li>• Ornamental Horticulture</li> <li>• Turfgrass Management</li> <li>• Pros and Cons of agriculture</li> </ul>	<ul style="list-style-type: none"> <li>• Students will correctly match each industry with their description.</li> </ul>	<ul style="list-style-type: none"> <li>• Horticulture</li> <li>• Floriculture</li> <li>• Landscape Design</li> <li>• Pomology</li> <li>• Olericulture</li> <li>• Ornamental Horticulture</li> <li>• Turfgrass Management</li> <li>• Pros and cons of agriculture</li> <li>• Eutrophication</li> <li>• Sphagnum Moss</li> </ul>	<p><b>Match that industry</b></p> <p><b>Summative: Test: Written</b></p>

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	<p>types of greenhouse businesses.</p> <p>b. Recognize costs related to production.</p> <p>c. Describe career opportunities associated with greenhouse management.</p>					
<p><b>Tools and Taping</b> (Week 5, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 3</p> <p>Students will demonstrate floral design techniques.</p> <p>Objective 3</p> <p>Identify floral design tools and supplies.</p> <p>a. Identify common tools used in floral design.</p> <p>b. Recognize and describe floral design supplies.</p>	<p>What is floral tape?</p> <p>Why do we use tape to hold things together?</p> <p>Are there specific tools for specific material?</p>	<ul style="list-style-type: none"> <li>• Hardware material Tools</li> <li>• Scissor</li> <li>• wire cutters</li> <li>• Fresh flower tools</li> <li>• Floral knife</li> <li>• Bunch cutter</li> <li>• pruner</li> <li>• Floral tape</li> <li>• Different uses</li> <li>• Different Colors</li> <li>• Gauge of wire sizes</li> </ul>	<ul style="list-style-type: none"> <li>• Students will be able to correctly tape a pen.</li> <li>• Students will be able to correctly tape wire.</li> <li>• Students will be able to visually identify different floral tools.</li> </ul>	<ul style="list-style-type: none"> <li>• Floral Tape</li> <li>• Parafin wax</li> <li>• Ribbon scissors</li> <li>• Bunch cutters</li> <li>• Gauge</li> <li>• Wire cutters</li> <li>• Floral Wire</li> </ul>	<p><b>Hershey Kiss Rose</b></p> <p><b>Summative: Performance: Lab Assignment</b></p> <p><b>Flower Pen</b></p> <p><b>Summative: Performance: Lab Assignment</b></p>
<p><b>Properties of Design</b> (Week 5, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12</p>	<p>Does it matter how you put the flowers in?</p> <p>Is floral design a art</p>	<ul style="list-style-type: none"> <li>• Properties of Design</li> <li>- Balance</li> <li>- Rhythm</li> <li>- Proportion</li> <li>- Focal Point</li> </ul>	<ul style="list-style-type: none"> <li>• Students will correctly use all 6 of the design properties</li> </ul>	<ul style="list-style-type: none"> <li>• Balance</li> <li>• Proportion</li> <li>• Rhythm</li> <li>• Focal Point</li> <li>• Color</li> <li>• Repetition</li> </ul>	<p><b>Properties of Design</b></p> <p><b>Lab Schematic</b></p> <p><b>Summative: Performance</b></p>

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	<p>Floriculture &amp; Greenhouse Management Standard 3 Students will demonstrate floral design techniques.</p> <p>Objective 4 Explain the principles and elements of floral design.</p> <p>a. Discuss the history and influence of different styles of design on the floriculture industry.</p> <p>b. Analyze the principles of floral design.</p> <p>c. Examine the concept of proportion and scale.</p> <p>d. Explain how the concept of balance is applied to floral design.</p> <p>e. Describe how rhythm is applied in floral work.</p> <p>f. Explain how the principles of dominance and focal point are used in floral design.</p> <p>g. Describe the major flower forms used in floral design.</p> <p>h. Explain how space and depth enhance floral design.</p> <p>i. Assess the</p>	<p>or a science? Is there a correct way or a wrong way to design flowers?</p>	<p>- Color - Color schemes - Repetition</p>	<ul style="list-style-type: none"> <li>• Students will correctly identify color schemes based off of the color wheel.</li> </ul>	<ul style="list-style-type: none"> <li>• Anagalous</li> <li>• Triadic</li> <li>• Equilateral</li> <li>• Complement</li> </ul>	<p><b>e: Lab Assignment Ribbon Color Lab Summative: Performance: Lab Assignment</b></p>

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	<p>importance of texture in floral design.</p> <p>j. Evaluate the influences of color on floral work.</p> <p>k. Explain basic geometric designs.</p>					
<p><b>Budvase</b> (Week 6, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 3</p> <p>Students will demonstrate floral design techniques.</p> <p>Objective 5</p> <p>Design floral arrangements using the principles and elements of design using at least four of the following indicators.</p> <p>a. Design corsages and boutonnieres.</p> <p>b. Design bud vase arrangements.</p> <p>c. Design vase arrangements.</p> <p>d. Design centerpieces.</p> <p>e. Design holiday arrangements.</p> <p>f. Design wedding</p>	<p>What is a budvase used for?</p> <p>What makes it for a budvase?</p> <p>Are all budvases the same?</p>	<ul style="list-style-type: none"> <li>• Budvase</li> <li>• Flowers used in budvase</li> <li>• Different styles of a budvase.</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will design a budvase including a bow.</li> </ul>	<ul style="list-style-type: none"> <li>• Budvase</li> <li>• Proportion of vase to flowers</li> <li>• Bottom Bow</li> <li>• Color Scheme</li> <li>• Visually pleasing</li> </ul>	<p><b>Construct a budvase</b></p> <p><b>Summative: Performance: Lab Assignment</b></p>



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	<p>pieces.  g. Design sympathy arrangements.  h. Design color bowls and hanging baskets.  i. Design arrangements using everlasting flowers.  j. Prepare a potted plant with foil.  k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Bow Tying</b>  <i>(Week 6, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education  UT: Grades 9-12 Floriculture &amp; Greenhouse Management  Standard 3  Students will demonstrate floral design techniques.  Objective 5  Design floral arrangements using the principles and elements of design using at least four of the following indicators.  a. Design corsages and boutonnieres.  b. Design bud vase arrangements.</p>	<p>What do we put bows on?  Where do the bows go?  Why do we tie bows?</p>	<ul style="list-style-type: none"> <li>• Bottom Bow</li> <li>• Middle Bow</li> <li>• Top Bow</li> </ul> <p>- Bird  - Heart  - Traditional</p>	<ul style="list-style-type: none"> <li>• Students will correctly tie all five types of bows.</li> </ul>	<ul style="list-style-type: none"> <li>• Bottom Bow</li> <li>• Middle Bow</li> <li>• Top Bow</li> <li>• Heart Bow</li> <li>• Bird Bow</li> <li>• Traditional Bow</li> <li>• Satin</li> <li>• Acetane</li> <li>• Wire guage</li> <li>• Floral Tape</li> </ul>	<p><b>Bow Tying Summative: Performance: Lab Assignment</b>  Correctly tie all 5 bow styles.</p>

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	<p>c. Design vase arrangements.</p> <p>d. Design centerpieces.</p> <p>e. Design holiday arrangements.</p> <p>f. Design wedding pieces.</p> <p>g. Design sympathy arrangements.</p> <p>h. Design color bowls and hanging baskets.</p> <p>i. Design arrangements using everlasting flowers.</p> <p>j. Prepare a potted plant with foil.</p> <p>k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Flower Anatomy</b> (Week 7, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 4</p> <p>Students will demonstrate greenhouse crop production techniques.</p> <p>Objective 9</p> <p>Propagate floriculture</p>	<p>Are there girl flowers and boy flowers?</p> <p>Can flowers be both boys and girls?</p> <p>Do flowers reproduce through sexual or asexual reproduction ?</p>	<ul style="list-style-type: none"> <li>• Female parts</li> <li>- Pistil</li> <li>- Stigma</li> <li>- Style</li> <li>- Ovary</li> <li>• Male Parts</li> <li>- Stamen</li> <li>- Anther</li> <li>- Filament</li> <li>• Monocot</li> <li>• Dicot</li> <li>• Sexual reproduction</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will visually identify male and female parts on the flower.</li> <li>• Student's will be able to dissect flowers and identify parts.</li> </ul>	<ul style="list-style-type: none"> <li>• Pistil</li> <li>• Stigma</li> <li>• Style</li> <li>• Ovary</li> <li>• Stamen</li> <li>• Anther</li> <li>• Filament</li> <li>• Monocot</li> <li>• Dicot</li> <li>• Sexual Reproduction</li> </ul>	<p><b>Carnation Dissection</b></p> <p><b>Summative: Performance: Lab Assignment</b></p>

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	<p>and greenhouse crops.</p> <p>a. Compare and contrast sexual and asexual reproduction.</p> <p>b. Explain pollination, cross-pollination, and self-pollination of flowering plants.</p> <p>c. Diagram the process of plant fertilization.</p> <p>d. Describe the process of seed germination.</p> <p>e. Explain the conditions required for seed germination.</p> <p>f. Explain the importance of seed viability and vigor.</p> <p>g. Demonstrate techniques for sowing seed.</p> <p>h. Describe optimal conditions for asexual propagation.</p> <p>i. Demonstrate techniques used to propagate plants by cuttings, division, separation, and layering.</p> <p>j. Transplant greenhouse plant materials.</p>					
<p><b>Boutonnieres</b> (Week 7, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12</p>	<p>Who wears Boutonnieres? Do we put bows on</p>	<ul style="list-style-type: none"> <li>Boutonnieres Construction</li> <li>Different styles of boutonniere</li> </ul>	<ul style="list-style-type: none"> <li>Correctly construct a boutonniere.</li> </ul>	<ul style="list-style-type: none"> <li>Boutonnieres</li> <li>Flower anatomy</li> <li>Floral Tape</li> <li>Floral Pins</li> </ul>	<p><b>Construct a Boutonnieres Summative: Performance: Lab Assignment</b></p>

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	<p>Floriculture &amp; Greenhouse Management Standard 3 Students will demonstrate floral design techniques.</p> <p>Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators.</p> <ol style="list-style-type: none"> <li>Design corsages and boutonnieres.</li> <li>Design bud vase arrangements.</li> <li>Design vase arrangements.</li> <li>Design centerpieces.</li> <li>Design holiday arrangements.</li> <li>Design wedding pieces.</li> <li>Design sympathy arrangements.</li> <li>Design color bowls and hanging baskets.</li> <li>Design arrangements using everlasting flowers.</li> <li>Prepare a potted plant with foil.</li> <li>Create bows and/or accessories appropriate for the design.</li> </ol>	<p>Boutonnieres? Where do you normally wear boutonnieres to?</p>	<ul style="list-style-type: none"> <li>Different flowers that are used in boutonnieres.</li> </ul>		<ul style="list-style-type: none"> <li>Babies</li> <li>Breath</li> <li>Filler</li> <li>Foliage</li> <li>Leather leaf fern</li> <li>Boutonniere Box</li> <li>Humidity</li> </ul>	

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<p><b>Single Corsage</b> (Week 8, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture &amp; Greenhouse Management Standard 3 Students will demonstrate floral design techniques. Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators. a. Design corsages and boutonnieres. b. Design bud vase arrangements. c. Design vase arrangements. d. Design centerpieces. e. Design holiday arrangements. f. Design wedding pieces. g. Design sympathy arrangements. h. Design color bowls and hanging baskets. i. Design arrangements using everlasting flowers.</p>	<p>Who wears corsages? Do we put bows on corsages? What type of events do we wear corsages to?</p>	<ul style="list-style-type: none"> <li>• Single flower corsage</li> <li>• Pin on Corsages</li> <li>• Wristlet corsages</li> <li>• Flowers for corsages</li> </ul>	<ul style="list-style-type: none"> <li>• Student's construct a single flower corsage.</li> </ul>	<ul style="list-style-type: none"> <li>• Corsage</li> <li>• wristlet</li> <li>• glue</li> <li>• floral tape</li> <li>• pin</li> <li>• filler flower</li> <li>• form flower</li> <li>• foliage</li> <li>• Corsage box</li> <li>• humidity</li> </ul>	<p><b>Construct a corsage</b> <b>Summative: Performance: Lab Assignment</b></p>

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	<p>j. Prepare a potted plant with foil. k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Propagation</b> (Week 8, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture &amp; Greenhouse Management Standard 4 Students will demonstrate greenhouse crop production techniques. Objective 10 Grow greenhouse crops. a. Plan a growing schedule to maximize the production of the greenhouse facility. b. Explain the importance of proper spacing of greenhouse crops and recommended spacing practices. c. Select the appropriate container and medium for a greenhouse crop.</p>	<p>What is propagation? Do plants reproduce through sexual reproduction or asexual reproduction? Can you clone plants?</p>	<ul style="list-style-type: none"> <li>• Sexual Reproduction <ul style="list-style-type: none"> <li>○ Seed</li> <li>○ Indirect Seeding</li> <li>○ Direct Seeding</li> </ul> </li> <li>• Asexual Reproduction <ul style="list-style-type: none"> <li>○ Leaf Cutting</li> <li>○ Leaf Bud Cutting</li> <li>○ Stem Cutting</li> <li>○ Herbaceous Cutting</li> <li>○ Softwood cutting</li> <li>○ Semi Hardwood Cutting</li> <li>○ Hardwood Cutting</li> <li>○ Root Cutting</li> <li>○ Seperation</li> <li>○ Division</li> <li>○ Layering</li> <li>○ Trench Layering</li> <li>○ Air Layering</li> <li>○ Mound Layering</li> <li>○ Grafting</li> <li>○ Budding</li> <li>○ Tissue Culture</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Student's will properly demonstrate the propagation methods.</li> </ul>	<ul style="list-style-type: none"> <li>• Cutting</li> <li>• Budding</li> <li>• Grafting</li> <li>• Layering</li> <li>• Division</li> <li>• Seperation</li> <li>• Tissue Culture</li> <li>• Asexual Reproduction</li> <li>• Sexual Reproduction</li> <li>• Indirect Seeding</li> <li>• Direct Seeding</li> </ul>	<p><b>Propagation in greenhouse. Summative: Performance: Authentic Task</b></p>

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	<p>d. Explain the purposes for pinching greenhouse crops and the techniques used.</p> <p>e. Describe disbudding procedures.</p> <p>f. Demonstrate proper watering techniques.</p> <p>g. Demonstrate production of potted flowering crops.</p> <p>h. Demonstrate production of bulb crops.</p> <p>i. Demonstrate production of bedding plants.</p> <p>j. Demonstrate production of foliage plants.</p>		<ul style="list-style-type: none"> <li>○ Transplanting</li> </ul>			
<p><b>Color</b> (Week 9, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 3</p> <p>Students will demonstrate floral design techniques.</p> <p>Objective 4</p> <p>Explain the principles and elements of floral design.</p> <p>a. Discuss the history and influence of</p>	<p>Is black and white on the color wheel? Why does color matter? Do people buy things based on color?</p>	<ul style="list-style-type: none"> <li>• Color wheels</li> <li>• Color Schemes on the color wheel <ul style="list-style-type: none"> <li>○ Analogous</li> <li>○ Monochromatic</li> <li>○ Complementary</li> <li>○ Triadic</li> <li>○ Double Complementary</li> <li>○ Alternate Complementary</li> <li>○ tetrad</li> <li>○ Split Complementary</li> </ul> </li> <li>• Color Schemes not on the color wheel</li> </ul>	<ul style="list-style-type: none"> <li>• Students will create a color wheel.</li> <li>• Students will design schemes on the color wheel and not on the color wheel.</li> </ul>	<ul style="list-style-type: none"> <li>• Analogous</li> <li>• Monochromatic</li> <li>• Complementary</li> <li>• Triadic</li> <li>• Double Complementary</li> <li>• Alternate Complementary</li> <li>• tetrad</li> <li>• Split Complementary</li> <li>• Tint</li> <li>• Shade</li> <li>• Hue</li> </ul>	<p><b>Color Wheel Summative: Performance: Lab Assignment</b></p> <p><b>Color Ribbon Lab Summative: Performance: Lab Assignment</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>different styles of design on the floriculture industry.</p> <p>b. Analyze the principles of floral design.</p> <p>c. Examine the concept of proportion and scale.</p> <p>d. Explain how the concept of balance is applied to floral design.</p> <p>e. Describe how rhythm is applied in floral work.</p> <p>f. Explain how the principles of dominance and focal point are used in floral design.</p> <p>g. Describe the major flower forms used in floral design.</p> <p>h. Explain how space and depth enhance floral design.</p> <p>i. Assess the importance of texture in floral design.</p> <p>j. Evaluate the influences of color on floral work.</p> <p>k. Explain basic geometric designs.</p>					
<p><b>Transplanting</b> (Week 9, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12</p>	<p>What does it mean to transplant the plant?</p>	<ul style="list-style-type: none"> <li>• Transplanting</li> <li>• Steps in transplanting</li> <li>• When transplanting should be done.</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will transplant greenhouse crops.</li> </ul>	<ul style="list-style-type: none"> <li>• Sow</li> <li>• Transplant</li> <li>• Stress</li> <li>• First true leaves</li> <li>• Medium</li> </ul>	<p><b>Transplanting in Greenhouse Summative: Performance</b></p>



Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>Floriculture &amp; Greenhouse Management</p> <p>Standard 4</p> <p>Students will demonstrate greenhouse crop production techniques.</p> <p>Objective 9</p> <p>Propagate floriculture and greenhouse crops.</p> <p>a. Compare and contrast sexual and asexual reproduction.</p> <p>b. Explain pollination, cross-pollination, and self-pollination of flowering plants.</p> <p>c. Diagram the process of plant fertilization.</p> <p>d. Describe the process of seed germination.</p> <p>e. Explain the conditions required for seed germination.</p> <p>f. Explain the importance of seed viability and vigor.</p> <p>g. Demonstrate techniques for sowing seed.</p> <p>h. Describe optimal conditions for asexual propagation.</p> <p>i. Demonstrate techniques used to propagate plants by</p>	<p>Do we have to transplant plants?</p> <p>Does transplanting tree plants out?</p>			<ul style="list-style-type: none"> <li>• photosynthesis</li> <li>• germination</li> <li>• germination bench</li> <li>• Labeling</li> <li>• Humidity</li> </ul>	<p><b>e: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	cuttings, division, separation, and layering. j. Transplant greenhouse plant materials.					
<b>Plant ID</b> <i>(Week 10, 1 Week)</i>	UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture & Greenhouse Management Standard 3 Students will demonstrate floral design techniques. Objective 1 Identify common plant materials used in floral design. a. Identify common cut flowers used in floral design. b. Identify common foliage used in floral design. c. Identify common live plants used in floral design.	How do we identify plants? What is a foliage plant? Are there other ways beside visual identification of plants?	<ul style="list-style-type: none"> <li>• Plant Id               <ul style="list-style-type: none"> <li>○ Scientific name</li> <li>○ Common name</li> <li>○ leaf description</li> <li>○ flower description</li> <li>○ flower colors</li> <li>○ Pictures</li> <li>○ this is off of the floral CDE</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Students will be able to visually identify plants.</li> </ul>	<ul style="list-style-type: none"> <li>• Scientific Name</li> <li>• Common Name</li> <li>• Cultivar</li> <li>• Mauve</li> <li>• Picotee</li> <li>• Annual</li> <li>• Biannual</li> <li>• Perrienele</li> <li>• Pubescent</li> <li>• foliage</li> </ul>	<b>Plant ID Quizzes</b> <b>Common: Test: Written</b>
<b>Containers</b> <i>(Week 10, 1 Week)</i>	UT: CTE: Agricultural Education UT: Grades 9-12	What is a container? Are all containers	<ul style="list-style-type: none"> <li>• Greenhouse containers               <ul style="list-style-type: none"> <li>○ pony pack</li> <li>○ 6 pack</li> <li>○ 3 inch pot</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Students will properly choose and select</li> </ul>	<ul style="list-style-type: none"> <li>• pony pack</li> <li>• 6 pack</li> <li>• 3 inch pot</li> <li>• 6 inch pot</li> </ul>	<b>Pick your container</b> <b>Summative: Performanc</b>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>Floriculture &amp; Greenhouse Management</p> <p>Standard 5 Students will explain floriculture business concepts.</p> <p>Objective 2 Prepare floriculture crops for sale.</p> <p>a. Clean plants and containers.</p> <p>b. Decorate plants and containers.</p> <p>c. Attach price tags and care instructions.</p> <p>Standard 6 Students will explain greenhouse business concepts.</p> <p>Objective 1 Prepare greenhouse crops for sale.</p> <p>a. Clean plants and containers.</p> <p>b. Decorate plants and containers.</p> <p>c. Calculate mark-up.</p> <p>d. Attach price tags and care instructions.</p>	<p>formal containers? Where can I find containers?</p>	<ul style="list-style-type: none"> <li>○ 6 inch pot</li> <li>○ Hanging basket</li> <li>○ seed flats</li> <li>○ large dish garden baskets</li> <li>○ Unique containers</li> <li>● Floriculture containers <ul style="list-style-type: none"> <li>○ vase</li> <li>○ bowl</li> <li>○ dish gardens</li> <li>○ unique containers</li> </ul> </li> </ul>	<p>different containers based on the floral need.</p>	<ul style="list-style-type: none"> <li>● hanging basket</li> <li>● dish garden</li> <li>● seed flat</li> <li>● vase</li> <li>● bowl</li> <li>● unique containers</li> </ul>	<p><b>e: Authentic Task</b></p>
<p><b>5 flower corsage</b> (Week 11, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12</p>	<p>Why do we make a five flower instead of just a single flower?</p>	<ul style="list-style-type: none"> <li>● 5 flower corsage</li> <li>● Steps in designing</li> <li>● styles</li> </ul>	<ul style="list-style-type: none"> <li>● Students will construct a</li> </ul>	<ul style="list-style-type: none"> <li>● carnation</li> <li>● babies breath</li> <li>● rose</li> <li>● leather fern</li> <li>● wax flower</li> </ul>	<p><b>5 flower corsage Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>Floriculture &amp; Greenhouse Management</p> <p>Standard 3 Students will demonstrate floral design techniques.</p> <p>Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators.</p> <ol style="list-style-type: none"> <li>a. Design corsages and boutonnieres.</li> <li>b. Design bud vase arrangements.</li> <li>c. Design vase arrangements.</li> <li>d. Design centerpieces.</li> <li>e. Design holiday arrangements.</li> <li>f. Design wedding pieces.</li> <li>g. Design sympathy arrangements.</li> <li>h. Design color bowls and hanging baskets.</li> <li>i. Design arrangements using everlasting flowers.</li> <li>j. Prepare a potted plant with foil.</li> <li>k. Create bows and/or accessories appropriate for the design.</li> </ol>	<p>Where should it be worn as in location on the body? What type of occasion should it be worn at?</p>	<ul style="list-style-type: none"> <li>• types of flowers that are used in it.</li> </ul>	<p>5 flower corsage.</p>	<ul style="list-style-type: none"> <li>• lemon leaf</li> <li>• floral tape</li> <li>• corsage pin</li> <li>• corsage box</li> <li>• proportion</li> </ul>	

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
<p><b>Hanging Baskets</b> (Week 11, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture &amp; Greenhouse Management Standard 3 Students will demonstrate floral design techniques. Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators. a. Design corsages and boutonnieres. b. Design bud vase arrangements. c. Design vase arrangements. d. Design centerpieces. e. Design holiday arrangements. f. Design wedding pieces. g. Design sympathy arrangements. h. Design color bowls and hanging baskets. i. Design arrangements using everlasting flowers.</p>	<p>What is a hanging basket? How much money should a hanging basket cost? What type of hanging basket should be used?</p>	<ul style="list-style-type: none"> <li>• Designing hanging baskets</li> <li>• Thrillers</li> <li>• Fillers</li> <li>• Spillers</li> <li>• Proper plants for hanging baskets</li> <li>• different hanging basket styles</li> <li>• different hanging basket container styles</li> </ul>	<ul style="list-style-type: none"> <li>• Design a hanging basket.</li> </ul>	<ul style="list-style-type: none"> <li>• hanging basket</li> <li>• thriller</li> <li>• filler</li> <li>• spiller</li> <li>• peat moss</li> <li>• hard plastic</li> <li>• wire and sphagnum moss</li> <li>• grasses</li> <li>• trailing vines</li> <li>• alyssum</li> <li>• Petunias</li> </ul>	<p><b>Design a hanging basket</b> <b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>j. Prepare a potted plant with foil.  k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Wrist Corsage</b>  <i>(Week 12, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education  UT: Grades 9-12 Floriculture &amp; Greenhouse Management  Standard 3  Students will demonstrate floral design techniques.  Objective 5  Design floral arrangements using the principles and elements of design using at least four of the following indicators.  a. Design corsages and boutonnieres.  b. Design bud vase arrangements.  c. Design vase arrangements.  d. Design centerpieces.  e. Design holiday arrangements.  f. Design wedding pieces.</p>	<p>Why do we use a wrist corsage more often than a pin on?  Which generation prefers which corsage style?  Is the process different?</p>	<ul style="list-style-type: none"> <li>• Wrist corsage</li> <li>• steps in designing</li> <li>• different styles of wrist corsages</li> <li>• Different flowers that are used in wrist corsages</li> </ul>	<ul style="list-style-type: none"> <li>• Students will design their own wrist corsage and construct it.</li> </ul>	<ul style="list-style-type: none"> <li>• Wrist Corsage</li> <li>• Wristlet</li> <li>• Carnations</li> <li>• Spray Roses</li> <li>• Pixie Carns</li> <li>• Roses</li> <li>• Leather fern</li> <li>• Babies breath</li> <li>• Wax flower</li> <li>• corsage box</li> <li>• satin acetane ribbon</li> </ul>	<p><b>Wrist Corsage Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>g. Design sympathy arrangements.</p> <p>h. Design color bowls and hanging baskets.</p> <p>i. Design arrangements using everlasting flowers.</p> <p>j. Prepare a potted plant with foil.</p> <p>k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Soil Media</b> (Week 12, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 4</p> <p>Students will demonstrate greenhouse crop production techniques.</p> <p>Objective 4</p> <p>Examine the components and properties of growing media.</p> <p>a. Describe the components of growing media.</p> <p>b. Describe the functions of growing</p>	<p>What is the difference between soil and dirt?</p> <p>Is soil all organic?</p> <p>Can I go get my soil outside?</p>	<ul style="list-style-type: none"> <li>• Soil Medium <ul style="list-style-type: none"> <li>○ Perlite</li> <li>○ Vermiculite</li> <li>○ Bark</li> <li>○ Organic Matter</li> <li>○ Sphagnum Moss</li> <li>○ Peat Moss</li> <li>○ Cocount Bark</li> <li>○ Lyme</li> </ul> </li> <li>• Ph Scale <ul style="list-style-type: none"> <li>○ 0-14</li> <li>○ Where plants like to live</li> <li>○ What can I add to change it.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Students will investigate different soils components by texture, sight, smell, and function.</li> <li>• Student's will test soil for Ph.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Ph Scale</li> <li>• Alkaline</li> <li>• Basic</li> <li>• Acidic</li> <li>• Perlite</li> <li>• Vermiculite</li> <li>• Bark</li> <li>• Organic Matter</li> <li>• Sphagnum Moss</li> <li>• Peat Moss</li> <li>• Cocount Bark</li> <li>• Lyme</li> </ul>	<p><b>What is in your soil</b></p> <p><b>Summative: Performance: Lab Assignment Ph testing soil</b></p> <p><b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>media.</p> <p>c. Determine desirable properties of growing media</p> <p>d. Evaluate the advantages and disadvantages of soilless media.</p> <p>Objective 5</p> <p>Investigate chemical characteristics of growing media.</p> <p>a. Demonstrate proper techniques for sampling growing media.</p> <p>b. Test and determine pH level of various growing media.</p> <p>c. Interpret pH test results of a growing media sample.</p> <p>Objective 6</p> <p>Supply nutrients to greenhouse crops.</p> <p>a. Explain plant nutrition.</p> <p>b. Describe pH and how it is modified.</p> <p>c. Describe the components of a fertilizer.</p> <p>d. Explain the methods of applying fertilizers to horticulture crops.</p> <p>Objective 8</p> <p>Identify and explain the functions of plant growth regulators.</p> <p>a. Compare the functions of plant</p>					



Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>hormones.  b. Examine commercial uses for plant growth regulators.</p>					
<p><b>Round Arrangement</b>  <i>(Week 13, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education  UT: Grades 9-12 Floriculture &amp; Greenhouse Management  Standard 3  Students will demonstrate floral design techniques.  Objective 5  Design floral arrangements using the principles and elements of design using at least four of the following indicators.  a. Design corsages and boutonnieres.  b. Design bud vase arrangements.  c. Design vase arrangements.  d. Design centerpieces.  e. Design holiday arrangements.  f. Design wedding pieces.  g. Design sympathy</p>	<p>What is a round arrangement?  Why do we make them round instead of square?  What is different between it and a budvase?</p>	<ul style="list-style-type: none"> <li>• Round arrangement</li> <li>• Steps in designing a round arrangement</li> <li>• different styles of a round arrangement</li> <li>• Different holiday round arrangements <ul style="list-style-type: none"> <li>○ Wreath</li> <li>○ Cornacopia</li> <li>○ Black cat in a pumpkin</li> <li>○ basic round arrangement</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Student's will design a round arrangement depending on what season is up.</li> </ul>	<ul style="list-style-type: none"> <li>• Dish Bowl</li> <li>• Top bows</li> <li>• floral foam</li> <li>• bisect</li> <li>• visually pleasing</li> <li>• color schemes not on the color wheel</li> <li>• cornacopia</li> <li>• wreath</li> <li>• carnations</li> <li>• wax flower</li> <li>• pons or daisies</li> </ul>	<p><b>Construct a round arrangement</b>  <b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>arrangements.  h. Design color bowls and hanging baskets.  i. Design arrangements using everlasting flowers.  j. Prepare a potted plant with foil.  k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Care and Function of Cut flowers</b>  <i>(Week 13, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education  UT: Grades 9-12 Floriculture &amp; Greenhouse Management  Standard 3  Students will demonstrate floral design techniques.  Objective 2  Care for fresh flowers and foliage.  a. Explain the basic care requirements of cut flowers (e.g., water, light, temperature).  b. Describe the causes of deterioration and death of flowers (e.g., ethylene gas).  c. Describe the steps of effective</p>	<p>Is caring for cut flowers different than caring for growing plants?  What makes it a cut flower?  Can all flowers be considered cut flowers?</p>	<ul style="list-style-type: none"> <li>• Steps in cutting flowers</li> <li>• Steps in keeping the flower alive post cutting</li> <li>• What causes flowers to die once they are cut</li> <li>• conditioning flowers</li> <li>• floral preservatives</li> <li>• main ingredients in floral preservatives</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will cut flowers</li> <li>• student's will demonstrate a process of caring for the flower once it is cut.</li> </ul>	<ul style="list-style-type: none"> <li>• deterioration</li> <li>• ethylene gas</li> <li>• floral preservative</li> <li>• carbohydrates</li> <li>• sugar</li> <li>• water</li> <li>• bunch cutter</li> <li>• 45 degree angle</li> <li>• conditioning flowers</li> </ul>	<p><b>Cutting flowers Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>conditioning of flowers and foliage. d. Explain the importance of using floral preservatives.</p>					
<p><b>Nutrition</b> (Week 14, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture &amp; Greenhouse Management Standard 4 Students will demonstrate greenhouse crop production techniques. Objective 6 Supply nutrients to greenhouse crops. a. Explain plant nutrition. b. Describe pH and how it is modified. c. Describe the components of a fertilizer. d. Explain the methods of applying fertilizers to horticulture crops. Objective 8 Identify and explain the functions of plant growth regulators. a. Compare the</p>	<p>What do plants need to survive? Is balancing their ration like balancing our ration? What causes them to look awful?</p>	<ul style="list-style-type: none"> <li>• Nutritional needs of plants</li> <li>• Cycle needs of plants <ul style="list-style-type: none"> <li>○ Photosynthesis</li> <li>○ Krebs Cycle</li> <li>○ Calvin Cycle</li> </ul> </li> <li>• Hormones <ul style="list-style-type: none"> <li>○ Artificial</li> <li>○ Natural</li> </ul> </li> <li>• Fertilizers <ul style="list-style-type: none"> <li>○ Chemical</li> <li>○ Organic</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Students will balance a ration for a given plant.</li> </ul>	<ul style="list-style-type: none"> <li>• Calcium</li> <li>• Phosphorus</li> <li>• potassium</li> <li>• nitrogen</li> <li>• Photosynthesis</li> <li>• Krebs Cycle</li> <li>• Calvin Cycle</li> <li>• Hormone</li> <li>• Fertilizer</li> <li>• Organic</li> <li>• Chemical</li> </ul>	<p><b>Balance a plant ration</b> <b>Summative: Performance: Lab Assignment</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>functions of plant hormones.</p> <p>b. Examine commercial uses for plant growth regulators.</p> <p>Objective 10 Grow greenhouse crops.</p> <p>a. Plan a growing schedule to maximize the production of the greenhouse facility.</p> <p>b. Explain the importance of proper spacing of greenhouse crops and recommended spacing practices.</p> <p>c. Select the appropriate container and medium for a greenhouse crop.</p> <p>d. Explain the purposes for pinching greenhouse crops and the techniques used.</p> <p>e. Describe disbudding procedures.</p> <p>f. Demonstrate proper watering techniques.</p> <p>g. Demonstrate production of potted flowering crops.</p> <p>h. Demonstrate production of bulb crops.</p> <p>i. Demonstrate production of bedding plants.</p> <p>j. Demonstrate</p>					

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>production of foliage plants.</p> <p>Objective 11 Discuss pest management techniques.</p> <p>a. Identify categories of pests (e.g., weeds, insects, fungi, etc.).</p> <p>b. Explain best management practices while maintaining environmental integrity.</p> <p>c. Discuss alternative pest control techniques.</p> <p>d. Demonstrate safe practices in selecting, applying, storing, and disposing of chemicals.</p> <p>e. Explain integrated pest management (IPM).</p>					
<p><b>Triangular Arrangement</b> (Week 15, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 3 Students will demonstrate floral design techniques.</p>	<p>What is the purpose of a triangular arrangement ?</p> <p>Being called a triangular arrangement is there a certain orientation it has to go? Where would I place a triangular</p>	<ul style="list-style-type: none"> <li>• Triangular arrangement</li> <li>• Steps in designing a triangular arrangement</li> <li>• Different flowers used in a triangular arrangement <ul style="list-style-type: none"> <li>○ Line flowers</li> <li>○ filler flowers</li> </ul> </li> <li>• Placement of a triangular arrangement</li> </ul>	<ul style="list-style-type: none"> <li>• Students will design a triangular arrangement.</li> </ul>	<ul style="list-style-type: none"> <li>• Line flowers</li> <li>• Filler flowers</li> <li>• Equilateral</li> <li>• Asymmetrical</li> <li>• Symmetrical</li> <li>• Hogarth shape</li> <li>• Gladiolus</li> <li>• Conical</li> <li>• Roses</li> <li>• Snap dragons</li> </ul>	<p><b>Design a triangular arrangement</b></p> <p><b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators.</p> <ul style="list-style-type: none"> <li>a. Design corsages and boutonnieres.</li> <li>b. Design bud vase arrangements.</li> <li>c. Design vase arrangements.</li> <li>d. Design centerpieces.</li> <li>e. Design holiday arrangements.</li> <li>f. Design wedding pieces.</li> <li>g. Design sympathy arrangements.</li> <li>h. Design color bowls and hanging baskets.</li> <li>i. Design arrangements using everlasting flowers.</li> <li>j. Prepare a potted plant with foil.</li> <li>k. Create bows and/or accessories appropriate for the design.</li> </ul>	arrangement ?	<ul style="list-style-type: none"> <li>• Containers for triangular arrangements</li> </ul>			
<p><b>Pricing</b> (Week 15, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12</p>	<p>How do we determine what we charge for plants? Is the mark up the same</p>	<ul style="list-style-type: none"> <li>• Floral Pricing <ul style="list-style-type: none"> <li>○ Different mark up strategies</li> <li>○ the cost of labor and materials</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Students will help set the prices for both floral products and for</li> </ul>	<ul style="list-style-type: none"> <li>• Mark up</li> <li>• labor</li> <li>• materials or hardware</li> <li>• perishables</li> <li>• marketing</li> <li>• wholesale</li> </ul>	<p><b>Floral and greenhouse pricing Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>Floriculture &amp; Greenhouse Management Standard 5 Students will explain floriculture business concepts.</p> <p>Objective 1 Price floral design work. a. Explain the importance of effective buying. b. Determine the costs for floral arrangements. c. Assess typical pricing strategies. d. Calculate mark-up.</p> <p>Objective 3 Explain the basics of marketing in the floriculture industry. a. Display floriculture materials for sale. b. Recognize ways of maintaining and increasing the effectiveness of horticultural business displays. c. Recognize how advertising is used. d. Complete sales tickets. e. Use proper telephone techniques. f. Describe effective packaging and</p>	<p>for floral plants as it is for greenhouse plants? Does it cost more for the pieces or for the labor?</p>	<ul style="list-style-type: none"> <li>○ How to market floral products</li> <li>● Greenhouse Pricing <ul style="list-style-type: none"> <li>○ Different mark up strategies</li> <li>○ The cost of labor and materials</li> <li>○ How to market greenhouse crops</li> </ul> </li> <li>● Wholesale</li> <li>● Retail</li> </ul>	<p>greenhouse products.</p>	<ul style="list-style-type: none"> <li>● retail</li> <li>● advertisement</li> <li>● flyer</li> <li>● brochure</li> <li>● radio advertisement</li> </ul>	<p><b>Developing and implementing a marketing plan</b> <b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>delivery.  g. Describe the impact of the international flower market on the floriculture industry.</p> <p>Objective 4  Describe floriculture business management.</p> <p>a. Differentiate the types of floriculture businesses.  b. Recognize costs related to floriculture production.  c. Analyze the importance of marketing, promotion, and sales.  d. Describe career opportunities associated with floriculture management.</p> <p>Standard 6  Students will explain greenhouse business concepts.</p> <p>Objective 1  Prepare greenhouse crops for sale.</p> <p>a. Clean plants and containers.  b. Decorate plants and containers.  c. Calculate mark-up.  d. Attach price tags and care instructions.</p>					



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	<p>Objective 2            Explain the basics of marketing in the greenhouse industry.            a. Recognize ways of maintaining and increasing the effectiveness of horticultural business displays.            b. Recognize how advertising is used.            c. Complete sales tickets.            d. Use proper telephone techniques.</p> <p>Objective 3            Describe greenhouse business management.            a. Differentiate the types of greenhouse businesses.            b. Recognize costs related to production.            c. Describe career opportunities associated with greenhouse management.</p>					
<p><b>Special Occasion Flowers</b>  <i>(Week 16, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education            UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p>	<p>What is considered special occasion flowers?            What brings in more money wedding flowers or</p>	<ul style="list-style-type: none"> <li>• Wedding flowers               <ul style="list-style-type: none"> <li>○ flowers for the bride</li> <li>○ flowers for the groom</li> <li>○ flowers for the bridal party</li> <li>○ flowers for the location</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Student's will construct special occasion flowers</li> <li>• Student's will price special</li> </ul>	<ul style="list-style-type: none"> <li>• Bridal bouquet</li> <li>• Brides maid bouquets</li> <li>• corsage</li> <li>• boutonniere</li> <li>• casket saddle</li> <li>• spray</li> <li>• sympathy planter</li> </ul>	<p><b>Construct special occasion flowers</b>  <b>Summative: Performance: Authentic Task Pricing special</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>Standard 3 Students will demonstrate floral design techniques.</p> <p>Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators.</p> <p>a. Design corsages and boutonnieres. b. Design bud vase arrangements. c. Design vase arrangements. d. Design centerpieces. e. Design holiday arrangements. f. Design wedding pieces. g. Design sympathy arrangements. h. Design color bowls and hanging baskets. i. Design arrangements using everlasting flowers. j. Prepare a potted plant with foil. k. Create bows and/or accessories appropriate for the design.</p>	<p>sympathy flowers? Do special occasion flowers vary with the culture?</p>	<ul style="list-style-type: none"> <li>○ pricing flowers</li> <li>● Sympathy flowers <ul style="list-style-type: none"> <li>○ flowers for the casket</li> <li>○ flowers for the area</li> <li>○ flowers for the family</li> <li>○ Pricing flowers</li> </ul> </li> <li>● Holiday flowers</li> </ul>	<p>occasion flowers</p>	<ul style="list-style-type: none"> <li>● sympathy basket</li> <li>● Full saddle</li> <li>● open saddle</li> <li>● half saddle</li> </ul>	<p><b>occasion flowers</b> <b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
<p><b>Pest Management</b> (Week 16, 1 Week)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture &amp; Greenhouse Management Standard 4 Students will demonstrate greenhouse crop production techniques. Objective 11 Discuss pest management techniques. a. Identify categories of pests (e.g., weeds, insects, fungi, etc.). b. Explain best management practices while maintaining environmental integrity. c. Discuss alternative pest control techniques. d. Demonstrate safe practices in selecting, applying, storing, and disposing of chemicals. e. Explain integrated pest management (IPM).</p>	<p>What is a pest? How is best to control a pest? Is organic or chemical better control?</p>	<ul style="list-style-type: none"> <li>• Different categories of pests</li> <li>• Different locations of pest</li> <li>• Different control of pest               <ul style="list-style-type: none"> <li>○ organic</li> <li>○ chemical</li> </ul> </li> <li>• Different forms of pest control outside of the greenhouse.</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will design a pest control method for a greenhouse.</li> </ul>	<ul style="list-style-type: none"> <li>• weed</li> <li>• insect</li> <li>• fungi</li> <li>• mollusc</li> <li>• rodent</li> <li>• pesticide</li> <li>• herbicide</li> <li>• fungicide</li> <li>• molluscicide</li> <li>• rodenticide</li> </ul>	<p><b>Pest management plan</b> <b>Summative: Performance: Lab Assignment</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
<p><b>Silk and Dry arrangements</b> (Week 17, 3 Weeks)</p>	<p>UT: CTE: Agricultural Education UT: Grades 9-12 Floriculture &amp; Greenhouse Management Standard 3 Students will demonstrate floral design techniques. Objective 5 Design floral arrangements using the principles and elements of design using at least four of the following indicators. a. Design corsages and boutonnieres. b. Design bud vase arrangements. c. Design vase arrangements. d. Design centerpieces. e. Design holiday arrangements. f. Design wedding pieces. g. Design sympathy arrangements. h. Design color bowls and hanging baskets. i. Design arrangements using everlasting flowers.</p>	<p>What is an everlasting flower? Why is there a negative connotation to silk or fake flowers? What is the best use of silk flowers or everlasting flowers?</p>	<ul style="list-style-type: none"> <li>• Silk or everlasting flowers</li> <li>• Drying flowers <ul style="list-style-type: none"> <li>○ pressing</li> <li>○ hanging</li> <li>○ kitty litter</li> <li>○ oven</li> <li>○ microwave</li> <li>○ silicon</li> </ul> </li> <li>• arranging silk or dry flowers.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will arrange a silk/ dry arrangement with flowers that they have prepared.</li> </ul>	<ul style="list-style-type: none"> <li>• Silk flowers</li> <li>• everlasting flowers</li> <li>• pressing</li> <li>• hanging</li> <li>• kitty litter</li> <li>• oven</li> <li>• microwave</li> <li>• silicon</li> <li>• daisy</li> <li>• roses</li> </ul>	<p><b>Dry arrangement</b> <b>Summative: Performance: Authentic Task</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>j. Prepare a potted plant with foil.            k. Create bows and/or accessories appropriate for the design.</p>					
<p><b>Greenhouse Unit</b>  <i>(Week 18, 1 Week)</i></p>	<p>UT: CTE: Agricultural Education            UT: Grades 9-12 Floriculture &amp; Greenhouse Management            Standard 4            Students will demonstrate greenhouse crop production techniques.            Objective 1            Describe greenhouse structures.            a. Differentiate greenhouse designs.            b. Review considerations for greenhouse frameworks.            c. Identify and describe greenhouse glazing materials.            d. Describe the functions of the headhouse.            e. Describe greenhouse bench</p>	<p>What are the pros of a greenhouse?            What are the cons of a greenhouse?            Why does everyone not build their own personal greenhouse?</p>	<ul style="list-style-type: none"> <li>• Greenhouse structures               <ul style="list-style-type: none"> <li>○ inside</li> <li>○ outside</li> <li>○ Covering</li> <li>○ flooring</li> </ul> </li> <li>• Greenhouse climate               <ul style="list-style-type: none"> <li>○ ventilation</li> <li>○ heating</li> <li>○ air condition</li> <li>○ lighting</li> <li>○ shading</li> </ul> </li> <li>• Organization of greenhouse.</li> </ul>	<ul style="list-style-type: none"> <li>• Student's will design their own greenhouse.</li> </ul>	<ul style="list-style-type: none"> <li>• Quonset</li> <li>• A frame</li> <li>• gothic arch</li> <li>• glass</li> <li>• polycarbonate</li> <li>• acrylic</li> <li>• hoop house</li> <li>• polyethylene</li> <li>• fiber glass</li> <li>• metal benches</li> <li>• wooden benches</li> </ul>	<p><b>Design your own greenhouse</b>  <b>Summative: Performance: Lab Assignment</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>options.</p> <p>f. Identify and operate supplemental lighting systems.</p> <p>Objective 2</p> <p>Explain greenhouse climate control.</p> <p>a. Describe methods of heating greenhouse structures.</p> <p>b. Contrast major greenhouse cooling and ventilation systems.</p> <p>c. Discuss how energy curtains are used to maintain greenhouse temperatures.</p> <p>d. Analyze greenhouse climate controls.</p> <p>Objective 3</p> <p>Describe automated greenhouse systems.</p> <p>a. Assess automated planting systems.</p> <p>b. Identify automated systems for moving plants in the greenhouse.</p> <p>c. Compare automated watering systems.</p> <p>Objective 10</p> <p>Grow greenhouse crops.</p> <p>a. Plan a growing schedule to maximize the production of the greenhouse facility.</p> <p>b. Explain the importance of proper spacing of greenhouse</p>					

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>crops and recommended spacing practices.</p> <p>c. Select the appropriate container and medium for a greenhouse crop.</p> <p>d. Explain the purposes for pinching greenhouse crops and the techniques used.</p> <p>e. Describe disbudding procedures.</p> <p>f. Demonstrate proper watering techniques.</p> <p>g. Demonstrate production of potted flowering crops.</p> <p>h. Demonstrate production of bulb crops.</p> <p>i. Demonstrate production of bedding plants.</p> <p>j. Demonstrate production of foliage plants.</p>					
<p><b>Careers</b> (Week 19, 1 Week)</p>	<p>UT: CTE: Agricultural Education</p> <p>UT: Grades 9-12 Floriculture &amp; Greenhouse Management</p> <p>Standard 1 Students will develop personal,</p>	<p>What are agricultural careers? Is agriculture a growing industry? Are there job openings in the agricultural area?</p>	<ul style="list-style-type: none"> <li>Define Careers</li> <li>Determine agricultural careers</li> </ul>	<ul style="list-style-type: none"> <li>Present and research agricultural careers for salary, schooling, pros and cons and typical days.</li> </ul>	<p>Bachelor degree Associates degree Masters degree Doctorate college university technical school trade school 2 year certificate apprentice internship</p>	<p><b>Career presentation</b> <b>Common:</b> <b>Oral: Presentation</b></p>

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>leadership, and career skills through FFA participation.</p> <p>Objective 1 Assess the role of FFA participation in developing personal and leadership skills.</p> <ul style="list-style-type: none"> <li>a. Identify important personal skills and the strategies used in developing the skills.</li> <li>b. Identify important leadership skills and the role of FFA participation in developing the skills.</li> <li>c. Balance</li> </ul> <p>Objective 2 Assess the role of FFA participation in developing career skills.</p> <ul style="list-style-type: none"> <li>a. List and describe proficiency awards appropriate for floriculture.</li> <li>b. List and describe career development events appropriate for horticulture.</li> <li>c. Relate the importance of supervised agricultural experience to FFA achievement.</li> <li>d. Utilize FFA and supervised agricultural experience</li> </ul>					



Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>participation to gain advanced degrees of FFA membership.</p> <p><b>Standard 5</b> Students will explain floriculture business concepts.</p> <p><b>Objective 4</b> Describe floriculture business management.</p> <p>a. Differentiate the types of floriculture businesses.</p> <p>b. Recognize costs related to floriculture production.</p> <p>c. Analyze the importance of marketing, promotion, and sales.</p> <p>d. Describe career opportunities associated with floriculture management.</p> <p><b>Standard 6</b> Students will explain greenhouse business concepts.</p> <p><b>Objective 3</b> Describe greenhouse business management.</p> <p>a. Differentiate the types of greenhouse businesses.</p> <p>b. Recognize costs</p>					

Unit	CTE Standards and Objectives	Essential Questions	Content	Skills	Vocabulary	Formative & Summative Assessments
	<p>related to production.  c. Describe career opportunities associated with greenhouse management.</p>					