

**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 1</b>	<b>Career Opportunities</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Describe job characteristics for career opportunities in the residential landscape industry.</li> </ol>
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Identify career choices in the residential landscape industry.</li> <li>2. Identify the educational requirements for careers in the residential landscape industry.</li> <li>3. Describe job responsibilities of landscape personnel.</li> </ol>
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<b>Essential Question(s):</b>	What are the job requirements and responsibilities of a residential landscaper?
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
<ol style="list-style-type: none"> <li>I. Preparing for a Career               <ol style="list-style-type: none"> <li>A. Making good choices</li> <li>B. Becoming successful                   <ol style="list-style-type: none"> <li>1. Education and training</li> </ol> </li> </ol> </li> <li>II. Getting and Succeeding in a Job               <ol style="list-style-type: none"> <li>A. Finding job openings</li> <li>B. Applying for a job</li> <li>C. Getting along in the job</li> </ol> </li> <li>III. Career Opportunities               <ol style="list-style-type: none"> <li>A. Landscape Architect</li> <li>B. Landscape Designer</li> <li>C. Landscape Construction</li> </ol> </li> </ol>	<p>Think pair share Role Play</p> <p>Job Applications Worksheets Case studies/scenarios</p> <p>Research</p>	<p>LifeKnowledge e-newsletter</p> <p>FFA –student manual Teacher designed materials</p> <p>Computer Internet <a href="http://www.diversityworking.com">www.diversityworking.com</a> Guest Speakers</p>

D. Landscape Maintenance E. Specialty Landscaper 1. Aquatic 2. Seasonal Flowers		
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<b>Unit Assessment:</b>	The student will research a career as part of their career objective, worksheets, open-ended questions, performance, rubric
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<b>Unit/Course CTSO Activity:</b>	Nursery Landscape CDE
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<b>Unit/Course Culminating Product:</b>	The student will produce a report about their career objective.
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<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree <input type="checkbox"/> Other:
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**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 2</b>	<b>Safety</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	Students will: 2. Identify safety precautions in the residential landscape and maintenance industry.
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	Students will: 1. Explain the way pesticides are classified according to toxicity. 2. Identify the types of pesticide license. 3. Explain the various pesticides record keeping requirements. 4. Identify the importance of preventative maintenance. 5. Safely redress a selected hand tool. 6. Describe the importance of servicing power equipment to the manufacturer's recommendation. 7. Set up a maintenance calendar. 8. Perform basic service recommendations on power equipment.
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<b>Essential Question(s):</b>	Why is it important to maintain tools and equipment? Why is pesticide safety so important?
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
I. Pesticide Safety A. Toxicity 1. General-Use 2. Restricted-Use  B. Pesticide Licensing 1. Private Applicator 2. Pesticide Dealer 3. Commercial Applicator and Operator 4. License Category	Pesticide Safety Web site PowerPoint Presentation Safety Test	University of Illinois @Urbana-Champaign, Pesticide Safety and Education Web site <a href="http://www.pesticidesafety.uiuc.edu">www.pesticidesafety.uiuc.edu</a>  PowerPoint Presentation

<ul style="list-style-type: none"> <li>5. License Requirements</li> <li>6. Applicator</li> <li>7. Operator</li> <li>8. Public Applicator and Operator</li> <li>9. Commercial Not-For-Hire Applicator and Operator</li> </ul> <p>C. Record Keeping</p> <ul style="list-style-type: none"> <li>1. Private Applicator</li> <li>2. Commercial Applicators</li> <li>3. Pesticide Dealers</li> </ul> <p>II. Power Equipment Safety</p> <ul style="list-style-type: none"> <li>A. Proper Maintenance</li> <li>B. Safety Precautions</li> <li>C. Maintenance Schedule</li> </ul> <p>III. Hand Tool Safety</p> <ul style="list-style-type: none"> <li>A. Selection of Tool</li> </ul>	<p>Test a blade for balance.</p> <p>Mower Blade</p> <p>When do you use a hand tool instead of a power tool?</p> <p>Right tool for the job  Price comparison cheap vs. professional grade tool  Observe dull tools vs. factory cuts on new blades and shears.  Clean and sharpen tools.</p>	<p>Owners manual  Computer-Internet  <a href="http://www.homedepot.com">www.homedepot.com</a> Sharpen blades video</p> <p><a href="http://www.stanleyworks.com/">www.stanleyworks.com/</a> or  <a href="http://www.toolsource.com">www.toolsource.com</a></p>
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<b>Unit Assessment:</b>	Safety test, demonstration
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<b>Unit/Course CTSO Activity:</b>	Nursery landscape CDE.
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<b>Unit/Course Culminating Product:</b>	The student will be able to keep pesticide records accurately and classify pesticides correctly as well as maintain and service tools and equipment.
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<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree <input type="checkbox"/> Other:
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**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 3</b>	<b>Plant Identification</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	Students will: 3. Identify residential landscape plants and turfgrasses by common name.
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	Students will: 1. Identify the major parts of residential landscape plants and turfgrasses. 2. Explain how residential landscape plants and turfgrasses are selected based on climate. 3. Identify characteristics of grass plants used in residential lawns.
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<b>Essential Question(s):</b>	Why is it necessary to identify residential plants and turfgrasses? What are the major parts of a turfgrass plant?
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
I. Residential Landscape Plants A. Annual B. Perennial C. Biennial D. Deciduous Shrub E. Evergreen Shrub F. Groundcover G. Vines H. Small Trees I. Large Trees	Collaborative learning Memorization Field Trip	Photographs Slideshows PowerPoint Presentations Notebook/Portfolio Internet
II. Residential Turfgrass A. Bermuda B. Zoysia	Cooperative Learning Memorization	Extension bulletins Photographs Slideshows

<p>C. Centipede D. St. Augustine E. Fescue</p> <p>III. Major parts of the plant A. Root B. Stem C. Leaf D. Flower E. Fruit</p>	<p>Set up small plots for identification.</p> <p>Note taking Worksheets</p>	<p>PowerPoint Presentations Notebook/Portfolio Internet</p> <p>Textbook Reference materials</p>
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<p><b>Unit Assessment:</b></p>	<p>Cooperative Learning, Collaborative Learning, Memorization, Note taking, Quiz</p>
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<p><b>Unit/Course CTSO Activity:</b></p>	<p>Students will learn plant identification to compete in the CDE Nursery/Landscape.</p>
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<p><b>Unit/Course Culminating Product:</b></p>	<p>Students will make identification labels for plants in the landscape around the school's campus.</p>
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<p><b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree  <input type="checkbox"/> Other:</p>
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<b>Unit Assessment:</b>	Performance tasks, Demonstrations, portfolio, extended task assignments
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<b>Unit/Course CTSO Activity:</b>	Prepare a landscape design using appropriate symbols, scale and following design principles to practice for the CDE Nursery/landscape.
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<b>Unit/Course Culminating Product:</b>	The student will be able to correctly draw a landscape design.
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<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree <input type="checkbox"/> Other:
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**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 5</b>	<b>Tools and Equipment</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	<p>Students will:</p> <ol style="list-style-type: none"> <li>5. Identify tools and equipment used for the installation and maintenance of a residential landscape.             <ul style="list-style-type: none"> <li>• Demonstrating the maintenance of hand tools and small power equipment.</li> </ul> </li> <li>6. Utilize skills needed to maintain drainage and irrigation systems.             <ul style="list-style-type: none"> <li>• Identifying various sprinklers used in an irrigation system</li> </ul> </li> </ol>
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Identify hand tools used in residential landscape.</li> <li>2. Identify equipment used in the residential landscape.</li> <li>3. Demonstrate the proper maintenance of hand tools and small power equipment.</li> <li>4. Describe skills needed to maintain drainage and irrigation systems.</li> <li>5. Locate controllers and size wiring.</li> <li>6. Determine water capacity and pressure.</li> <li>7. Establish sprinkler circuits and install valves.</li> <li>8. Determine irrigation requirements.</li> <li>9. Identify various sprinklers used in an irrigation system and establish spacing range.</li> </ol>
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<b>Essential Question(s):</b>	<p>How are hand tools and power tools maintained properly? What skills are needed to maintain drainage and irrigation systems?          What types of sprinkler systems are used in an irrigation system?</p>
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
<p>I. Identification of Tools, their use and maintenance</p> <ol style="list-style-type: none"> <li>A. Shovels</li> <li>B. Hoes</li> <li>C. Rakes</li> <li>D. Forks</li> <li>E. Spreaders/Sprayers</li> </ol>	<p>Discussion            Note sheet            Identification charts            Guided practice            Demonstration            ID test            Students choose a tool, explain its use, purpose, and safety practices.</p> <p>Demonstrate and explain a tool's use and safety            Students practice cleaning and sharpening tools.</p>	<p>Landscaping Tools            Tool identification sheet            Quiz  <a href="http://www.stanleyworks.com">www.stanleyworks.com</a>  <a href="http://www.toolsources.com">www.toolsources.com</a>            Reference books</p>





**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 6</b>	<b>Residential Landscape Maintenance</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	<p>Students will</p> <p>7. Maintain trees, shrubs, plants, and turfgrasses in a residential landscape.          Examples: fertilizing, controlling weeds, mowing, edging, weed-eating</p>
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Describe how the biology of woody and herbaceous plants influences the maintenance practices.</li> <li>2. Explain recommended watering practices for plants used in the residential landscape and maintenance industry.</li> <li>3. Explain guidelines for fertilizing plants used in the residential landscape and maintenance industry.</li> <li>4. Explain how to select and apply mulches to the landscape.</li> <li>5. Explain how to properly prune.</li> <li>6. Explain why plants are pruned.</li> </ol>
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<b>Essential Question(s):</b>	<p>Why plants are pruned and why is it important to do it correctly?          How can stress be alleviated for plants?</p>
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
<p>I. Plant Stress</p> <ol style="list-style-type: none"> <li>A. Environment</li> <li>B. Transplanting</li> </ol> <p>II. Ways to reduce plant stress</p> <ol style="list-style-type: none"> <li>A. Water correctly</li> <li>B. Fertilize correctly</li> <li>C. Mulch correctly</li> </ol> <p>III. Factors influencing watering</p> <ol style="list-style-type: none"> <li>A. Weather</li> <li>B. Soil Type</li> <li>C. Plant characteristics</li> </ol>	<p>Tour school –make a list of plants that show signs of stress.</p> <p>Have students determine what caused stress and provide recommendations to alleviate stress on the plants.</p> <p>Group Investigation</p> <p>Observation Logs</p>	<p>Pencil/paper/clipboard</p> <p>Graphic organizer</p> <p>DVD/Videos</p> <p>PowerPoint Presentations</p>

<p>IV Decision to water based on</p> <ul style="list-style-type: none"> <li>A. Plant symptoms</li> <li>B. Unnecessary watering <ul style="list-style-type: none"> <li>1. Poor soil drainage</li> <li>2. Too much water</li> </ul> </li> </ul> <p>V. Methods of watering</p> <ul style="list-style-type: none"> <li>A. Sprinklers</li> <li>B. Soaker hoses</li> <li>C. Water bags</li> <li>D. Microirrigation</li> <li>E. Soil watering needle</li> </ul> <p>VI. Fertilizing guidelines</p> <ul style="list-style-type: none"> <li>A. Beneficial <ul style="list-style-type: none"> <li>1. Stress</li> <li>2. Nutrient deficiencies</li> </ul> </li> <li>B. When to fertilize <ul style="list-style-type: none"> <li>1. Spring</li> <li>2. Fall</li> </ul> </li> <li>C. How to fertilize <ul style="list-style-type: none"> <li>1. Dry fertilizer in holes</li> <li>2. Soluble fertilizer injections</li> <li>3. Broadcast spreading</li> <li>4. Soluble fertilizer spraying</li> <li>5. Solid fertilizers in trunks(capsules)</li> </ul> </li> </ul> <p>VII. Mulching</p> <ul style="list-style-type: none"> <li>A. Selection <ul style="list-style-type: none"> <li>1. Organic Mulches</li> <li>2. Inorganic Mulches</li> </ul> </li> <li>B. Application <ul style="list-style-type: none"> <li>1. Landscape fabric</li> <li>2. Depth of mulch</li> </ul> </li> <li>C. Advantages <ul style="list-style-type: none"> <li>1. Controls weeds</li> <li>2. Maintains uniform soil temperature</li> <li>3. Increases water holding capacity in sandy soil</li> <li>4. Increase aeration in clay soil</li> </ul> </li> </ul>	<p>Sketch top view of tree/show placement of holes for application of dry fertilizer</p> <p>Work-based learning</p>	<p>Practice tree and shrub fertilization</p> <p>Graph paper</p> <p>Extension bulletins</p>
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<ul style="list-style-type: none"> <li>5. Prevents and reduce soil erosion</li> <li>6. Improve soil tilth</li> <li>7. Reduce soil moisture evaporation</li> <li>8. Improves appearance</li> <li>9. Promotes root growth</li> <li>10. Releases nutrients by increase breakdown of organic matter</li> </ul> <p>D. Disadvantages</p> <ul style="list-style-type: none"> <li>1. Cannot suppress large weeds</li> <li>2. Some are flammable</li> <li>3. Provides rodent and insect habitats</li> <li>4. May introduce plant diseases</li> <li>5. May reduce nitrogen levels</li> <li>6. Prevents water penetration</li> <li>7. Difficult to handle</li> </ul>		
<p>VIII. Aesthetic maintenance</p> <ul style="list-style-type: none"> <li>A. Mowing</li> <li>B. Edging</li> <li>C. Weed-eating</li> </ul>	<p>Discussion</p>	<p>Photographs Slideshows</p>
<p>IX. Pruning</p> <ul style="list-style-type: none"> <li>A. Parts of the tree</li> <li>B. Parts of the shrub</li> <li>C. Reasons for pruning</li> <li>D. Proper time to prune</li> <li>E. How to prune</li> <li>F. How to prune hedges</li> </ul>	<p>Generate a list of possible reasons for pruning</p> <p>Demonstration</p> <p>Walk around school and point out examples of improper pruning.</p>	<p>Guest speaker</p> <p>Pruning Equipment</p>

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<b>Unit Assessment:</b>	Student performance on application activities, written test
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<b>Unit/Course CTSO Activity:</b>	The student will answer questions from practice CDE tests pertaining to mulching and fertilizing.
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<b>Unit/Course Culminating Product:</b>	The student will be able to prune a shrub correctly.
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<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree <input type="checkbox"/> Other:
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**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 9</b>	<b>Business Management</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	Students will: 11. Demonstrate appropriate business-related work ethics and managerial skills for a lawn maintenance business.
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	Students will: 1. Describe the meaning of ethics and ethical values. 2. Discuss the importance of work related ethics. 3. List the six basic principles of ethics. 4. Discuss consequences of being unethical. 5. Identify proper communication etiquette and behavior. 6. Identify basic office etiquette and successful characteristics of an ideal employee. 7. Describe the desirable work traits of a residential landscaper. 8. Describe common tasks performed by a residential landscaper. 9. Describe the types of business records kept by a residential landscaper. 10. Describe the ways residential landscapers advertise their services.
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<b>Essential Question(s):</b>	What are some consequences of being unethical? How do you recognize the principles of ethics in different contexts and situations? What types of business records are important to establish?
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
I. Ethics A. The Six Basic Principles of ethics B. Consequences of being unethical <ol style="list-style-type: none"> <li>1. Loss of respect/credibility</li> <li>2. Loss of job</li> <li>3. Loss of privileges</li> <li>4. Loss of responsibility</li> <li>5. Loss of trust</li> </ol>	Teacher led discussion Journal Handouts Role Play Oral Questions Case study debates Work in pairs. Develop example of ethical dilemma students face in jobs. Discuss how you would handle this dilemma.	Merriam-Webster Dictionary online Journal entry-aspects of good ethics Internet <a href="http://www.goodcharacter.com">www.goodcharacter.com</a> LifeKnowledge Newspaper

<p>II. Basic office etiquette</p> <ul style="list-style-type: none"> <li>A. Introductions</li> <li>B. Proper Handshake</li> <li>C. Conversation do's and don'ts</li> </ul> <p>III. Work Traits</p> <ul style="list-style-type: none"> <li>A. Enjoys working with people</li> <li>B. Hard worker</li> <li>C. Assumes responsibility</li> <li>D. Shows initiative and is self motivated</li> <li>E. Time management skills</li> <li>F. Good communication skills</li> <li>G. Works with hand tools and machinery</li> </ul> <p>IV. Common tasks</p> <ul style="list-style-type: none"> <li>A. Plant propagation</li> <li>B. Soil preparation</li> <li>C. Potting/transplanting</li> <li>D. Watering/fertilizing</li> <li>E. Pest control</li> <li>F. Pruning</li> </ul> <p>V. Business Records</p> <ul style="list-style-type: none"> <li>A. Inventory of supplies</li> <li>B. Invoices</li> <li>C. Payroll records</li> <li>D. Pesticide records</li> </ul>	<p>Brainstorm what it means to be ethical.</p> <p>Role play Quiz</p> <p>Guided practice Simulations Exhibitions</p> <p>Work based-learning</p> <p>Worksheets</p>	<p>FFA worksheet- How to tie a tie.</p> <p>Reference materials Teacher prepared materials</p> <p>Landscaping tools and equipment Reference materials</p> <p>Teacher prepared materials Reference materials Calculator</p>
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<b>Unit Assessment:</b>	Worksheets, Work-based learning, Exhibitions, Simulations, Guided Practice
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<b>Unit/Course CTSO Activity:</b>	FFA members will be given a series of customer complaints/problems and asked to solve the problem to the best of their ability. Students will be given ethical dilemma case studies to solve.
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<b>Unit/Course Culminating Product:</b>	Students will simulate traits of proper work ethics, good communication skills, office etiquette and management skills.
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<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree <input type="checkbox"/> Other:
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**Course Title: RESIDENTIAL LANDSCAPE ESTABLISHMENT AND MAINTENANCE**

<b>Unit: 10</b>	<b>Technology</b>
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<b>Content Standard(s) and Depth of Knowledge Level(s):</b>	Students will: 12. Describe technological advancements in the residential landscape industry.
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<b>Learning Objective(s) and Depth of Knowledge Level(s):</b>	Students will: 1. Describe how satellites can be used to determine the position of objects on earth. <ul style="list-style-type: none"> <li>• The Global Positioning System(GPS)</li> <li>• NAVSTAR(Navigation by Satellite Timing and Ranging)</li> </ul> 2. Describe the role of automated monitoring systems. <ul style="list-style-type: none"> <li>• Precision agriculture</li> <li>• Irrigation system</li> </ul> 3. Describe Computerized Design
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<b>Essential Question(s):</b>	What role do monitors play in the landscape industry?
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<b>Content Knowledge</b>	<b>Suggested Instructional Activities Rigor &amp; Relevance Framework (Quadrant)</b>	<b>Suggested Materials, Equipment and Technology Resources</b>
I. Technological advancements A. Global Positioning System(GPS) B. NAVSTAR( Navigation by satellite timing and ranging) C. Automated monitoring systems D. Computerized Design	Virtual Field Trips Guest Speakers Hide and Seek with GPS	Global Positioning System(GPS) Computer /Internet LCD Projector Reference Materials

<b>Unit Assessment:</b>	Quiz, Student Notebook, Portfolio
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<b>Unit/Course CTSO Activity:</b>	FFA members will use the latest technologies to prepare for CDEs
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<b>Unit/Course Culminating Product:</b>	Students will be able to use a CAD program to design a landscape.
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<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Postsecondary Degree <input checked="" type="checkbox"/> University Degree <input type="checkbox"/> Other:
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