



CTSO Course Alignments: Landscaping and Turf Science

Below you will find standards for the Landscaping and Turf Science course aligned with competitive events from appropriate career and technical student organizations (CTSOs). Knowing the aligned events for your organization will allow you to have additional tools for teaching course standards, as well as increase student engagement and preparation in your CTSO activities. The final column recommends potential tools from other CTSO organizations. Even if your students are not participating in these organizations, available rubrics, tools, and materials can also add to the instructional resources at your disposal for best teaching your content.

Important to note: While the aligned activities below can be important tools in teaching course standards, it is important to note that events may not cover a standard in its entirety and should not be the sole instructional strategy used to address a standard.

	STANDARD	ALIGNED FFA COMPETITIVE EVENTS/PROGRAMS	OTHER POTENTIAL CTSO TOOLS & RESOURCES
1	Gather and analyze labor data from sources such as the United States Bureau of Labor Statistics and the Tennessee Department of Labor to predict the employment outlook in landscaping and turf management careers. Summarize the interpersonal, business, and technical skills needed for a career in landscaping or turf management. Develop a resume for a selected occupation that includes documented development of industry-related skills (i.e., work experience, SAE records, and proficiency applications). (TN Reading 2; TN Writing 4, 9)	<ul style="list-style-type: none"> • FFA: Job Interview 	<ul style="list-style-type: none"> • FCCLA: Job Interview, Career Investigation, Entrepreneurship • HOSA: Job Seeking Skills • SkillsUSA: Job Interview, Entrepreneurship, Employment Application Process • TSA: Career Preparation
2	Review common laboratory safety procedures for tool and equipment operation in the agricultural and biosystems engineering laboratories, including but not limited to accident prevention and control procedures. Demonstrate the ability to follow safety and operational procedures in a lab setting and complete a safety test with 100 percent accuracy. (TN Reading 3; ARNR CS)		<ul style="list-style-type: none"> • HOSA: Biomedical Laboratory Science • SkillsUSA: Occupational Health and Safety • TSA: Biotechnology Design
3	Develop illustrative models that identify the basic parts of trees and shrubs. Demonstrate the ability to visually identify and distinguish between common tree and shrub species used for landscaping and describe research-based practices in harvesting, transportation, transplanting, and care. (TN Reading 7; TN Writing 4, 8; TN Biology II 7)	<ul style="list-style-type: none"> • FFA: Forestry, Nursery and Landscape 	<ul style="list-style-type: none"> • HOSA: Extemporaneous Health Poster • TSA: Desktop Publishing, Promotional Graphics

4	Using descriptive text, summarize methods for general care and maintenance of trees and shrubs, including planting, pruning, mulching, and fertilizing techniques. Drawing on research and technical data, justify the importance of site evaluation, preparation, and consideration of hardiness zones in the selection of trees and shrubs. (TN Reading 2, 3; TN Writing 2)	<ul style="list-style-type: none"> • FFA: Forestry, Nursery and Landscape 	<ul style="list-style-type: none"> • HOSA: Researched Persuasive Speaking
5	Visually identify and distinguish among common ground cover, vines, and plants used for landscaping. Differentiate function, form, and growth requirements for common perennials, annuals, and biennials.	<ul style="list-style-type: none"> • FFA: Floriculture, Nursery and Landscape 	
6	Assess methods for general care and maintenance of ground cover, vines, and plants, including planting, pruning, mulching, and fertilizing techniques. Recommend specific vines and ground covers to solve special landscaping issues, and justify recommendations in an argumentative text citing textual and technical evidence. (TN Reading 2; TN Writing 1)	<ul style="list-style-type: none"> • FFA: Floriculture, Nursery and Landscape 	<ul style="list-style-type: none"> • FCCLA: Advocacy • HOSA: Researched Persuasive Speaking
7	Cite specific textual evidence to compare and contrast the functions and components of turf grasses of common turf grass species. Demonstrate the ability to visually identify and distinguish between turf grass species and cultivars and compose an argument justifying their applications for specific uses. (TN Reading 1; TN Writing 1, 9)	<ul style="list-style-type: none"> • FFA: Nursery and Landscape 	
8	Describe methods for the establishment and maintenance of turf grasses, including soil preparation, installation, water, nutrient and pH needs, and fertilizing techniques, attending to appropriate ratios and calculations. Draw conclusions about the importance of site selection, site preparation, and consideration of hardiness zones in the selection of turf grass species and cultivars. (TN Reading 3, 9)	<ul style="list-style-type: none"> • FFA: Nursery and Landscape 	
9	Evaluate and compare special management needs of residential, commercial, and sports turf. Identify management practices and associated equipment requirements for mowing, irrigation and weed, disease, and fungus control for common turf grass species. (TN Reading 1, 3; TN Math N-Q)	<ul style="list-style-type: none"> • FFA: Nursery and Landscape 	
10	Identify and classify basic ornamental flowers and plants (i.e., potted, cut) used for the commercial interior plantscape, and summarize their propagation, installation techniques, and maintenance requirements, citing applicable technical texts. Drawing on knowledge acquired in previous courses, demonstrate in a live or presentation format the ability to construct an interior display using a variety of plant materials, including but not limited to foliage, flowering plants (both cut and potted), live, and permanent/silk plants. (TN Reading 2; TN Biology II 7)	<ul style="list-style-type: none"> • FFA: Floriculture, Nursery and Landscape 	

11	Identify and recommend effective management practices for the interior environment, including light, humidity, growing media, and disease and pest control. Compare and contrast decorative accessory items (containers, planters, water features, permanent/silk plants, live plants) in the interior plantscape. (TN Reading 9)	<ul style="list-style-type: none"> • FFA: Floriculture, Nursery and Landscape 	
12	Identify and compare the common landscape and turf grass pests and their respective prevention and control methods. Categorize the basic types of pesticides and describe their application methods, including but not limited to rate, environmental conditions, and reentry times. Using quantitative reasoning and appropriate units, calculate proper formulations of pesticides based upon label directions by creating systems of equations that describe numerical relationships. (TN Reading 3; TN Math N-Q, A-CED)	<ul style="list-style-type: none"> • FFA: Floriculture, Nursery and Landscape 	
13	Demonstrate in a live setting or in a presentation the ability to properly mix and apply pesticides precisely, attending to important safety standards, selection, handling, application, storage, and disposal. (TN Reading 3; TN Math N-Q)	<ul style="list-style-type: none"> • FFA: Floriculture, Nursery and Landscape 	
14	Develop a written resource describing the seven principles of xeriscaping and indications for use in landscapes, citing specific textual evidence. (TN Reading 2; TN Writing 4, 8; TN Math N-Q)	<ul style="list-style-type: none"> • FFA: Nursery and Landscape 	<ul style="list-style-type: none"> • HOSA: Researched Persuasive Speaking, Extemporaneous Writing
15	Examine the various types of water gardens and pools and their applications for landscape enhancement. Develop a customer information packet outlining best management practices to maintain a healthy water garden and pool, addressing at minimum the following considerations: pH, nitrate, dissolved oxygen, algae, pollutants, filter requirements, and feed schedules. (TN Reading 3, 7, 9; TN Writing 2)	<ul style="list-style-type: none"> • FFA: Nursery and Landscape 	
16	Compare and contrast different irrigation systems and summarize their advantages and disadvantages. Identify irrigation tools and system components and their function or application. Applying basic plumbing principles, calculate the water supply flow rate, head pressure requirements, and pipe and pump size considerations for a water garden, pool, or irrigation system. Identify and demonstrate the plumbing skills required to install irrigation and water features in a landscape or turf setting. (TN Reading 3; TN Math N-Q, A-CED, F-BF)	<ul style="list-style-type: none"> • FFA: Agricultural Technology and Maintenance 	<ul style="list-style-type: none"> • SkillsUSA: Plumbing
17	Design an irrigation system for a residential landscape and develop a bid presentation that identifies the project timeline, required permits, costs of installation and selected materials. (TN Writing 4; TN Math N-Q, G-MG)	<ul style="list-style-type: none"> • FFA: Agricultural Technology and Maintenance 	

18	Interpret topographical and soil maps to evaluate site suitability for selected landscape plants. Create a site analysis checklist to evaluate a proposed landscape site. (TN Writing 4; TN Math N-Q, G-MG)	<ul style="list-style-type: none"> • FFA: Land Evaluation 	
19	Develop a list of tools and skills necessary for drafting landscape designs, including computer-assisted methods. Demonstrate the use of drafting tools and design equipment to create a basic landscape design. (TN Writing 6; TN Math G-MG)	<ul style="list-style-type: none"> • FFA: Agricultural Technology and Maintenance 	<ul style="list-style-type: none"> • TSA: Computer-Aided Design (CAD) 2D, Architecture, Computer-Aided Design (CAD) 2D, Engineering, Technical Design and Application
20	Explore landscape design principles to outline the components of a comprehensive landscape design plan. Prepare comprehensive landscape plans using prospective residential and commercial plots and develop a landscape bid package and presentation for each plan. (TN Writing 7; TN Math G-MG)	<ul style="list-style-type: none"> • FFA: Marketing Plan, Nursery and Landscape 	
21	Compare and contrast different business models. Create a chart to illustrate the use, advantages, and disadvantages of each. Research successful landscaping and turf grass management businesses locally and use evidence from research to evaluate the skills and resources utilized for successful small business implementation. (TN Reading 7; TN Writing 4, 7, 8)	<ul style="list-style-type: none"> • FFA: Marketing Plan, Nursery and Landscape 	<ul style="list-style-type: none"> • DECA: Business Operations Research Events, Entrepreneurship Innovation Plan, Entrepreneurship Participating, Entrepreneurship Written, Entrepreneurship – Growing Your Business • FBLA: Agribusiness, American Enterprise Project, Business Plan, Emerging Business Issues, Entrepreneurship
22	Using industry-specific terminology, explain the process for preparing a price estimate for landscape designs and packages. Create a price estimate and develop a presentation to secure a bid on a landscape project. (TN Reading 2, 4; TN Writing 4; TN Math N-Q)	<ul style="list-style-type: none"> • FFA: Marketing Plan, Nursery and Landscape 	<ul style="list-style-type: none"> • DECA: Professional Selling, Financial Consulting, Entrepreneurship Innovation Plan, Entrepreneurship Participating, Entrepreneurship Written, Entrepreneurship – Growing Your Business • FBLA: Business Calculations, Business Math, Business Plan, Business Financial Plan
23	Demonstrate the ability to interpret and read landscape drawings by measuring and calculating materials needed to execute the plan. Evaluate factors that affect profitability. (TN Reading 3; TN Math N-Q, G-MG, S-MD)	<ul style="list-style-type: none"> • FFA: Agricultural Technology and Maintenance, Marketing Plan, Nursery and Landscape 	

ALL	CAN BE USED WITH ALL/MOST STANDARDS	<ul style="list-style-type: none">• FFA: Floriculture, Nursery and Landscape	<ul style="list-style-type: none">• FCCLA: Illustrated Talk, Chapter in Review Display, Chapter in Review Portfolio• HOSA: Extemporaneous Writing, Prepared Speaking• SkillsUSA: Career Pathways Showcase, Job Skills Demonstration A, Job Skills Demonstration O, Prepared Speech, Extemporaneous Speaking, Chapter Display• TSA: Extemporaneous Presentation, Prepared Presentation
------------	--	---	--