



Nursery/Landscape

Purpose

The purpose of the Tennessee FFA Nursery/Landscape Career Development Event is to promote career interest, encourage proficiency development and recognize excellence in participants of the event which includes all aspects of the industry to produce, market, utilize and maintain landscape plants (woody and herbaceous plants and turf grasses), as well as related production and landscaping products, equipment and services including design.

Objectives

Participants in the nursery/landscape CDE will be able to utilize the skills specific to each of the following categories:

- **Nursery/Landscape Principles:** Apply nursery and landscape principles and practices as they impact residential, commercial, public and recreational applications.
- **Plant Materials:** Demonstrate the ability to identify, select and utilize nursery and landscape plants (interior/exterior), landscape materials and turf grasses commonly used in the United States.
- **Plant Disorders:** Demonstrate the ability to identify unhealthy plant conditions due to pests, nutritional/physiological disorders and mechanical/chemical injury.
- **Cultural Practices:** Demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, harvesting, sustainability, marketing, and maintenance of interior and exterior landscape plants and turf grasses.
- **Design and Construction:** Demonstrate knowledge of the principles and techniques of landscape design, estimating and construction.
- **Supplies and Equipment:** Demonstrate the ability to identify, select, use and maintain appropriate supplies and equipment for nursery and landscape operations, including equipment and procedures in mechanization and automation.
- **Safety:** Demonstrate knowledge of safety practices in nursery and landscape operations.
- **Interpersonal Relations:** Demonstrate skills in oral business communications.
- **Business Management:** Demonstrate an understanding of marketing principles and business management as well as proper sales and service skills.
- **Records and Reports:** Demonstrate the ability to prepare estimates and complete financial statements.

Event Rules

- It is highly recommended that participants wear appropriate “work clothing” for the activities for the competition.
- Under no circumstances will any participant be allowed to touch or handle plant materials or other specimens during the event except as expressly permitted in practicums.
- Teams will be composed of four members and all four scores will count.

Event Format

Activities and practicums will identify time limits. Time limits given are approximate and subject to change.

Equipment to bring:

- A clean clipboard
- At least two No. 2 pencils
- Additional items allowed, but not required, include the following:
 - A hand pruner or knife.

TEAM INTERACTIVE EVENTS

Phase 1-A: Team Skills Challenge (200-400 team points)

This phase is designed to evaluate the team's ability to apply nursery/landscape knowledge and skills by completing a variety of hands-on and problem-solving activities. No equipment will be started during the event. If a skills challenge is selected using equipment, students will explain and/or demonstrate how to use the equipment without starting it. Teams will be given a list of tasks that may be accomplished individually, in pairs or in larger numbers as determined by the team members according to the skills, experience and preferences of each team member. After completing their tasks, team members may then assist other team members as time allows. The number and type of activities will vary from year to year. General topic areas (not actual tasks) will be communicated in the team orientation packet. Both objective questions and qualitative evaluations may be included in the task scoring. Some examples of activities include the following:

- Determine equipment specifications and demonstrate pre-check operations.
- Demonstrate and/or explain lawn care procedures and equipment operation.
- Demonstrate and/or explain hardscape procedures, e.g., pavers or retaining wall installation, or irrigation pipe assembly.
- Demonstrate and/or explain chemical handling procedures, e.g., fertilizer or pesticide equipment calibration and application.
- Demonstrate and/or explain preparing service receipts.
- Demonstrate and/or explain plant material quality assessment.
- Demonstrate and/or explain pruning maintenance.
- Demonstrate and/or explain safety practices.

Scoring of the separate tasks will be based on correct answers for objective questions or on criteria appropriate for the task recorded by a judge.

INDIVIDUAL EVENTS

Phase 2: General Knowledge Examination (150 points per contestant)

Objective questions will be prepared on topics reflecting subject areas in the objectives. This phase will evaluate the participant's knowledge and understanding of basic horticultural principles in producing, marketing, using and maintaining landscape plants and turf. Participants will record their answers on a scan form. The test will come from the last five years of National FFA Nursery & Landscape exam (2018, 2019, 2021, 2022, 2023)

Phase 3: Identification of Plants, Pests, Disorders, and Beneficial Insect (140 points per contestant)

Participants will identify items selected from the provided list covering the following categories:

- Plant materials will be presented as intact, live specimens, photos, plant parts or any combination.
- Pests and disorders will be presented as a damaged specimen, photograph or preserved specimen, herbarium sheet, insect mount, etc. A "disorder" label will be with an item to designate identification of a problem rather than the plant.
- Beneficial insects and other organisms that benefit the landscape by feeding on harmful organisms.

Each specimen will be designated by a station number. When the participant identifies the item, its name is then located on the identification list. The participant then records the number by that name on a scan form at the respective station number.

Each participant will be provided a copy of the list at the event site. No specimens or items may be touched or handled in any way.

Phase 4: Landscape Estimating (100 points per contestant)

This practicum is designed to evaluate participant knowledge of and ability in the following areas:

- Evaluating a landscape design
- Reading a landscape drawing
- Determining materials needed to execute a landscape plan
- Maintenance, estimating and bidding
- Evaluating factors that affect profitability of a landscape business

A landscape drawing, scratch paper and a calculator will be provided to the participants. There will be objective questions about the landscape plan. Participants will record their answers using a scan form.

Phase 5: Nursery Propagation or Potting (50 points per contestant)

This practicum evaluates participant knowledge of and ability to perform fundamental nursery production practices. All participants will perform one of the following exercises. The selected exercise will not be announced prior to the start of the event.

- **Propagating Nursery Stock:** Each participant will be furnished with a stock plant or stock plant material, rooting flat and media, rooting hormone, a hand pruner, a label and marking pen. Personal propagating knives or pruners are allowed. Participants are to prepare the cuttings and place them in the media with a single label.
- **Potting Nursery Stock:** Each participant will be furnished with a supply of plants, nursery containers of appropriate size and growing media. Hand pruners, a label and a marking pen will also be provided. Personal pruners are allowed. The participants will pot the plants, one per container, using standard nursery practices. Plant division or grading of liners may be involved. One finished container will be labeled.

An official will observe and score each participant during the practicum. Scoring criteria are listed on the respective scorecards.

Scoring

Participant scores are the sum of the five individual phases of the event. Team scores are the sum of all member's scores plus the group portion of the team skills challenge. Possible points are as follows:

Phase	Individual Points	Team Points
General knowledge exam	150	600
Identification	150	600
Landscape estimating	100	400
Nursery propagation/potting	50	200
Team Skills Challenge		200-400
POINT TOTALS	450	2050-2250

TIEBREAKERS

If needed in the case of ties, final placings will be determined by comparing, in order, scores for the following:

Individuals

- Identification
- Landscape estimating
- General knowledge exam

Teams

- Team skills challenge
- Team identifications core
- Team general knowledge exam score

References

The following list of references is a guide to team training and is not meant to be all-inclusive.

Some content areas have more than one title listed. This reflects the wide array of quality references available for this event. No single reference is recommended as superior over others in that area. Multiple references are desirable as no single source is comprehensive for the entire nursery/landscape CDE. References other than those listed may be equally valuable resources, along with the many video and computer-based training aids available.

- Nursery/Landscape CDE materials, shop.FFA.org
- Past CDE materials and other resources are available on FFA.org.

GENERAL REFERENCES

- Introduction to Horticulture. (Current edition.) Charles B. Schroeder, Eddie Dean Seagle, Lorrie M. Felton, John M. Ruter, William Terry Kell, and Gerard Krewer. Pearson Prentice Hall, Inc., Englewood Cliffs, N.J. ISBN 0130364134
- Introductory Horticulture. (Current edition.) H. Edward Reiley and Carroll L. Shry, Jr. Clifton Park, N.Y.: Cengage Learning. ISBN 9781435480391
- Ornamental Horticulture. Current edition. Jack Ingels. Cengage Learning., Albany, N.Y. ISBN-13: 9781435498167
- Introduction to Plant and Soil Science and Technology. (Current edition.) Ronald J. Biondo and Jasper S. Lee. Pearson Prentice Hall, Inc., Englewood Cliffs, N.J. ISBN 0813432162

LANDSCAPE

- Landscaping Principles and Practices. (Current edition.) Jack Ingels. Cengage Learning., Albany, N.Y. ISBN 13: 9781428376410
- Landscaping Construction. (Current edition.) David Sauter. Cengage Learning., Albany, N.Y. ISBN 143549718X
- Landscape Training Manuals for Installation, Irrigation, and Maintenance Technicians. (Current edition.) National Association of Landscape Professionals, 950 Herndon Pkwy, Suite 450, Herndon, Va. 20170, https://www.landscapeprofessionals.org/LP/Store/Publications/PUBK_001.aspx

TURF

- Turfgrass Science and Management. (Current edition.) Robert D. Emmons. Cengage Learning, Albany, N.Y. ISBN 10: 1418013307

NURSERY

- Plant Propagation: Principles and Practices. (Current edition.) Hudson T. Hartmann, Fred T. Davies, Jr., Dale E. Kester, and Robert L. Genieve. Pearson Education, Boston. ISBN 0135014492
- American Standard for Nursery Stock. (Current edition.) American Hort, 525 9th St NW Suite 800, Washington, DC. (available as a pdf file free to nonmembers at <https://www.americanhort.org/education/american-nursery-stock-standards/>)

SECONDARY REFERENCES

- Practical Horticulture. (Current edition.) Laura W. Rice and Robert P. Rice. Pearson, Inc., Englewood Cliffs, N.J. ISBN 0135038669
- Manual of Woody Landscape Plants. (Current edition.) Michael A. Dirr. Stipes Publishing Co., Champaign, Ill. ISBN 978-1-58874-868-3
- Know It and Grow It III: A Guide to the Identification and Use of Landscape Plants. (Current edition.) Carl E. Whitcomb. Lacebark, Inc. Stillwater, Okla. ISBN 0961310910
- Manual of Herbaceous Ornamental Plants. (Current edition.) Steven M. Still. Stipes Publishing Co., Champaign, Ill. ISBN 0-87563-433-8.
- Herbaceous Perennial Plants: A Treatise on Their Identification, Culture, and Garden Attributes. (Current edition.) Allan M. Armitage, Stipes Publishing Co., Champaign, Ill. ISBN 978-1-58874-868-3.
- Landscape Construction Procedures, Techniques, and Design. (Current edition.) Floyd Giles. Stipes Publishing Co., Champaign, Ill. ISBN 0875638848

TRADE PERIODICALS

- Turf Magazine plus several other on-line titles. Moose River Media LLC., <https://turfmagazine.com/>
- [Lawn and Landscape .com](http://LawnandLandscape.com)
- [Landscape Management.net](http://LandscapeManagement.net)
- The Edge— NALP's publication, <https://www.landscapeprofessionals.org/LP/LP/Media/planet-news.aspx>
- Nursery Management Magazine, nurserymag.com

INDUSTRY CATALOGS

- Many horticultural supply company catalogs can be utilized for reference support on tools, equipment and supplies that may not be illustrated in other sources.
- A.M. Leonard, Inc., 665 Spiker Road, Piqua, OH 45356 (513/773-2697 or <https://www.amleo.com/>)
- Hummert International, 4500 Earth City Expressway, Earth City, Mo. 63045, 800-325-3055, <https://www.hummert.com>

WEBSITES AND PROBLEM SAMPLES

Additional links and resources will be included as they are developed or identified, along with the following links of the CDE partners:

- <http://www.stihlusa.com/information/>
- <http://www.kubota.com>
- <https://www.upl-ltd.com/us>
- <http://www.treefund.org>
- <https://www.landscapeprofessionals.org/>

Nursery/Landscape Plant Identification

No.	Botanical Name	Common Name
101	<i>Abelia x grandiflora cv.</i>	Glossy Abelia
102	<i>Acer palmatum cv.</i>	Japanese Maple
103	<i>Acer rubrum cv.</i>	Red Maple
104	<i>Acer saccharum cv.</i>	Sugar Maple
105	<i>Aglaonema commutatum</i>	'Chinese Evergreen'
106	<i>Ajuga reptans cv.</i>	Carpet Bugle
107	<i>Amelanchier arborea</i>	Downy Serviceberry
108	<i>Aquilegia x hybrida cv.</i>	Columbine
109	<i>Astilbe hybrid cv.</i>	Astilbe
110	<i>Begonia semperflorens-cultorum</i>	Wax Begonia
111	<i>Berberis x mentorensis</i>	Mentor Barberry
112	<i>Betula nigra</i>	River Birch
113	<i>Buddleia davidii cv.</i>	Butterfly Bush
114	<i>Buxus microphylla cv.</i>	Littleleaf Boxwood
115	<i>Camellia japonica cv.</i>	Common Camellia
116	<i>Cedrus atlantica 'Glauca'</i>	Blue Atlas Cedar
117	<i>Cercis canadensis</i>	Redbud
118	<i>Chaenomeles speciosa cv.</i>	Japanese (Flowering) Quince
119	<i>Clematis hybrid</i>	Clematis
120	<i>Cornus florida cv.</i>	Flowering Dogwood
121	<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
122	<i>Crataegus phaenopyrum</i>	Washington Hawthorn
123	<i>Cynodon dactylon cv</i>	Bermudagrass
124	<i>Dieffenbachia maculata cv.</i>	Spotted Dumb Cane
125	<i>Dracaena deremensis 'Warneckii'</i>	Striped Dracaena
126	<i>Dracaena fragens 'Massangeana'</i>	Corn Plant
127	<i>Echinaceae purpurea</i>	Purple Coneflower
128	<i>Epipremnum spp.</i>	Pothos
129	<i>Euonymus alatus</i>	Winged Euonymus
130	<i>Euonymus fortunei cv.</i>	Wintercreeper
131	<i>Fraxinus American cv.</i>	White Ash
132	<i>Festuca spp. and cv.</i>	Fescue
133	<i>Ficus benjamina</i>	Benjamin Fig
134	<i>Ficus elastica 'Decora'</i>	Decora Rubber Plant
135	<i>Forsythia x intermedia cv.</i>	Border Forsythia

No.	Botanical Name	Common Name
136	<i>Gaillardia aristata cv.</i>	Common Blanketflower
137	<i>Gardenia jasminoides cv.</i>	Gardenia
138	<i>Ginkgo biloba</i>	Ginkgo, Maidenhair Tree
139	<i>Gleditsia triacanthos inermis cv.</i>	Thornless Honeylocust
140	<i>Hedera helix cv.</i>	English Ivy
141	<i>Helleborus orientalis cv.</i>	Lenten Rose
142	<i>Heemerocallis spp. and cv.</i>	Day lily
143	<i>Heptapleurum actinophylla</i>	Schefflera, Octopus Tree
144	<i>Heptapleurum arbuticola</i>	Dwarf Schefflera
145	<i>Heuchera cv.</i>	Coral Bells, Alumroot
146	<i>Hibiscus syriacus cv</i>	Rose of Sharon
147	<i>Hosta x hybrida cv.</i>	Plantain Lily
148	<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea
149	<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea
150	<i>Ilex cornuta cv.</i>	Chinese Holly
151	<i>Ilex crenata cv.</i>	Japanese Holly
152	<i>Ilex x meserveae cv.</i>	Meserve Holly
153	<i>Impatiens hybrid cv.</i>	Impatiens
154	<i>Itea virginica</i>	Sweetspire
155	<i>Juniperus chinensis cv.</i>	Chinese Juniper
156	<i>Juniperus horizontalis cv.</i>	Creeping Juniper
157	<i>Lagerstroemia indica cv.</i>	Crape Myrtle
158	<i>Lavandula angustifolia</i> *New 2025	*New 2025 English Lavendar
159	<i>Leucanthemum x superbum cv.</i>	Shasta Daisy
160	<i>Liquidambar styraciflua</i>	Sweet Gum
161	<i>Liriodendron tulipifera</i>	Tuliptree
162	<i>Liriope spp. cv.</i>	Lilyturf
163	<i>Lonicera japonica 'Halliana'</i>	Hall's Japanese Honeysuckle
164	<i>Magnolia grandiflora cv.</i>	Southern Magnolia
165	<i>Magnolia x soulangiana cv.</i>	Chinese (Saucer) Magnolia
166	<i>Mahonia aquifolia cv.</i>	Oregon Grape
167	<i>Malus spp. and cv.</i>	Flowering Crabapple
168	<i>Miscanthus sinensis cv.</i>	Miscanthus grass
169	<i>Myrica pensylvanica</i>	Bayberry

No.	Botanical Name	Common Name
170	<i>Nandina domestica</i>	Heavenly Bamboo
171	<i>Nyssa sylvatica</i>	Sour (Black) Gum
172	<i>Pachysandra terminalis</i>	Japanese Spurge
173	<i>Paeonia hybrid cv.</i>	Peony
174	<i>Parthenocissus tricuspidata</i>	Boston Ivy
175	<i>Pelargonium x hortorum cv.</i>	Zonal Geranium
176	<i>Pennisetum ruppelia</i>	Fountain Grass
177	<i>Petunia x hybrida cv.</i>	Petunia
178	<i>Philodendron scandens oxycardium</i>	Heartleaf Philodendron
179	<i>Phlox paniculate</i>	Garden Phlox
180	<i>Phlox sublata cv.</i>	Moss Pink
181	<i>Picea abies</i>	Norway Spruce
182	<i>Picea pungens cv.</i>	Colorado (Blue) Spruce
183	<i>Pieris japonica</i>	Lily-of-the-Valley Bush
184	<i>Pinus mugo</i>	Mugo Pine
185	<i>Pinus strobus</i>	Eastern White Pine
186	<i>Pinus thunbergiana</i>	Japanese Black Pine
187	<i>Platanus x acerifolia</i>	London Planetree
188	<i>Poa pratensis cv.</i>	Kentucky Bluegrass
189	<i>Podocarpus macrophyllus</i>	Southern Yew
190	<i>Potentilla fruticosa cv.</i>	Shrubby Cinquefoil
191	<i>Prunus laurocerasus cv.</i>	Cherry Laurel
192	<i>Prunus serrulata</i>	Kwanzan Japanese Flowering Cherry
193	<i>Pyracantha coccinea cv.</i>	Firethorn
194	<i>Quercus alba</i>	White Oak

No.	Botanical Name	Common Name
195	<i>Quercus palustris</i>	Pin Oak
196	<i>Quercus rubra</i>	Red Oak
197	<i>Rhododendron Hybrid</i>	Exbury Hybrid Azalea
198	<i>Rhododendron x catawbiense</i>	Catawba Hybrid Rhododendron
199	<i>Rosa spp.</i>	Landscape/Shrub Rose cv.
200	<i>Rudbeckia fulgida</i>	Black-eyed Susan
201	<i>Salvia nemorosa cv.</i>	Meadow Sage
202	<i>Sedum spp.</i>	Sedum
203	<i>Spiraea x bumalda</i>	Bumalda Spirea
204	<i>Syringa vulgaris cv.</i>	Common Lilac
205	<i>Taxodium distichum</i>	Bald Cypress
206	<i>Taxus spp. and cv.</i>	Yew
207	<i>Thuja occidentalis cv.</i>	American Arborvitae
208	<i>Tilia cordata</i>	Littleleaf Linden
209	<i>Tsuga canadensis</i>	Canadian Hemlock
210	<i>Verbena x hybrida cv.</i>	Garden Verbena
211	<i>Viburnum trilobum</i>	American Cranberrybush Viburnum
212	<i>Viburnum x burkwoodii</i>	Burkwood Viburnum
213	<i>Vinca minor cv.</i>	Periwinkle
214	<i>Viola x wittrockiana cv.</i>	Pansy
215	<i>Weigela florida</i>	Weigelia
216	<i>Wisteria sinensis cv.</i>	Chinese Wisteria
217	<i>Yucca filamentosa</i>	Adam's Needle

Pests, Disorders and Beneficial Insects Identification

No.	Item Name
Pests	
218	Aphid
219	Bagworm
220	Borer
221	Leafhopper
222	Leaf Miner
223	Scale
224	Spider Mite
225	Snail/Slug
226	Tick
227	Whitefly
228	White Grub
Diseases	
229	Anthraxnose
230	Apple Scab
231	Black Spot
232	Botrytis
233	Canker
234	Cedar-Apple Rust
235	Crown Gall
236	Fire blight
237	Powdery Mildew
238	Root Rot

No.	Item Name
Weeds	
239	Annual Bluegrass
240	Broadleaf Plantain
241	Buckhorn Plantain
242	Chickweed
243	Clovers
244	Crabgrass
245	Dandelion
246	Henbit
247	Nutsedge
248	Oxalis
249	Purslane
250	Poison Ivy
Physiological Problems	
251	Frost/Freeze Injury
252	Iron Deficiency
253	Leaf Scorch (drought/winter burn)
254	Nitrogen Deficiency
255	Pot-Bound Roots
256	String Trimmer Injury
257	2,4-D Injury
Beneficial Insects	
258	Lacewing
259	Lady Beetle
260	Paper Wasp
261	Praying Mantis
262	Spider

Potting Nursery Stock Practicum Scorecard

50 POINTS

Name _____ Member Number _____

Chapter _____ State _____ Team Number _____

	Strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 1-0 points	Weight	Points Earned
Potting Process (34 points)					
Preparation of Plants Handles plants properly selecting for quality and uniformity, inspecting/pruning and grooming the damaged parts and pruning excess root length.	Plants are uniform in size and shape, properly handled, correct number selected, properly inspected, pruned and prepared for planting.	Plants are somewhat uniform in size and shape, somewhat properly handled, slightly off in correct number selected, failed to properly inspect, prune or prepare for planting.	Plants are not uniform in size and shape, poorly handled, correct number not selected, failed to properly inspect, prune or prepare for planting.	x 2	
Placement of Plants in Containers Plant centered and vertical at the proper depth. Roots carefully and properly spread and covered.	Holes are made prior to placing plant in soil, the entire root system is covered, leaving proper stem length visible and properly set.	Minor amount of roots are showing, planted slightly too deep or shallow and set somewhat correctly.	A large amount of roots are showing or plant stem is covered with soil.	x 2	
Media Filling and Settling Sufficient media added Media settled by bumping or hand firming Plant remains stable	Growing media is filled to the inner lip of the pot, properly settled, stabilizing the plant in the container.	Growing media is filled slightly too high or low, media was improperly settled leaving the plant slightly unstable.	Growing media is left very low or completely fills pot, media was improperly settled leaving the plant unstable.	x 2	
	2 points	1 points	0 points	Weight	Points Earned
Labeling of Completed Units Legibly labeled with the plant (variety) name and date	Legibly labeled with date planted, plant name, and cultivar.	Somewhat legibly labeled with some but not all information required.	Illegible or no label present or labeled with incorrect information.	x 1	
Safety Practices Applied Safety practices followed with proper cutting technique and tools stowed. Minimal clutter/good organization in work area	Followed safety practices - properly closing tools, using proper cutting technique, and maintaining work area.	Followed most safety practices, - properly closing tools, using proper cutting technique, and maintaining work area fairly well.	Failed to follow safety practices, - properly closing tools and using proper cutting technique, the work area needs to be more organized.	x 1	
Potting Productivity and Response to Questions (16 points)					
Note: 6 points for questions					
	10-7 points	6-4 points	3-0 points	Weight	Points Earned
Quantity & Quality Overall quality, uniformity, and number of units completed	Required number of units completed; final product uniform, materials upright, clean/heat, commercially acceptable	Approximately 2/3 completed; final product moderately uniform, materials upright, clean/heat, generally acceptable	Less than 2/3 of units completed; final product not uniform, materials vary in condition, generally non-commercial condition	X 1	
	6-5 points	4 - 2 points	1-0 points	Weight	Points Earned
Response to Questions	Answered questions correctly	Answered some questions correctly	Did not or incorrectly answered questions.	X 1	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE					

Judge's Name _____

Judge's Signature _____

Date _____

Propagating Nursery Stock Practicum Scorecard

50 POINTS

Name _____ Member Number _____
Chapter _____ State _____ Team Number _____

	Strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 1-0 points	Weight	Earned
Propagation Process (34 points)					
Removal of Cuttings Selects best quality uniform stock; Clean cuts at appropriate lengths	Best stock selected and clean cuts made at appropriate length	Most stock selected is of appropriate quality and mostly clean cuts made close to appropriate length.	Cutting stock is of poor quality with poorly made cuts of an incorrect length.	x 1	
Preparation of Cuttings Angled or wounded basal cuts used in correctly prepared cuttings; correctly placed in relation to nodes. Cutting/buds not damaged.	Cuttings are correctly prepared with angled or wounded basal cuts without damage to the cutting or the buds.	Cuttings are mostly correctly prepared with angled or wounded basal cuts with minimal damage to the cutting or the buds.	Cuttings are incorrectly prepared with damage to the cutting or the buds.	x 2	
	7-5 points	4-2 points	1-0 points	Weight	Earned
Application of Proper Hormone Sufficient applied and excess removed; Hormone kept clean.	Clean hormone applied in sufficient amounts with excess removed from cutting.	Clean hormone applied without removing excess from cutting.	Failed to keep hormone clean and applied sparingly.	1	
	8-6 points	5-3 points	2-0 points	Weight	Earned
Placement of Cuttings in Media Proper medium depth, as applicable; Media furrow cut and closed; Proper sticking depth; Efficient row and cutting spacing.	Cuttings are placed at the proper depth in medium with furrow cut and closed; Cuttings are placed in efficient rows and cutting spacing.	Cuttings are mostly placed at the proper depth in medium with furrow cut and closed; Most cuttings are placed in efficient rows and cutting spacing.	Few or no cuttings are placed at the proper depth in medium with furrow cut and closed; Cutting rows or poor and spacing inappropriate.	1	
	2 points	1 points	0 points	Weight	Earned
Labeling of Completed Units Legibly labeled with the plant (variety) name and date	Legibly labeled with date planted, plant name, and cultivar.	Somewhat legibly labeled with some but not all information required.	Illegible or no label present or labeled with incorrect information.	x 1	2
Safety Practices Applied Safety practices followed with proper cutting technique and tools stowed. Minimal clutter/good organization in work area	Followed safety practices - properly closing tools, using proper cutting technique, and maintaining work area.	Followed most safety practices, - properly closing tools, using proper cutting technique, and maintaining work area fairly well.	Failed to follow safety practices, - properly closing tools and using proper cutting technique, the work area needs to be more organized.	x 1	2
Propagation Productivity and Response to Questions (16 points)					
Note: 6 points for questions					
	10-7 points	6-4 points	3-0 points	Weight	Earned
Quality of Units Completed • Overall quality and uniformity of lot	Final product presented to the judge with plants upright, pot clean, and in sellable condition	Final product presented to the judge with plants upright, pot clean, and in sellable condition	Final product presented to judge in non-sellable condition	X1	
	6-5 points	4 - 2 points	1-0 points	Weight	Earned
Response to Questions	Answered questions correctly	Answered some questions correctly	Did not or incorrectly answered questions.	X1	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE					

Judge's Name _____ Judge's Signature _____ Date _____
Judges please award points as whole numbers only, no fractions

Nursery/Landscape Team Skills Challenge

200-400 POINTS

The team skills challenge may have between two to four skills. *Each skill may take up to 20 minutes to complete. It is the responsibility of the team to determine how to split their team to complete the challenges presented within the rotation. The skills chosen will be communicated out to advisors at least two weeks prior to the state event.*

Chapter	State	Team Number
A.	Score =	points of possible
B.	Score =	points of possible
C.	Score	points of possible
D.	Score	points of possible
E.	Score	points of possible
F.	Score	points of possible
G.	Score	points of possible
H.	Score	points of possible
Total Points		of 200-400 Points Possible

Judge's Name

Judge's Signature

Date

Skill Number	Skill Title	Page	Points
1	Plant Layout	17	100
2	Irrigation Zone Installation and Repair	18	100
4	Line Trimmer	19	25
5	Chainsaw	20	50
6	Edger	21	25
7	Power Blower	22	25
8	Push Mower	23	50
9	ZTR Mower	24	50
10	Sod Installation	25	100
11	Tree Planting	26	100
12	Pruning	27	100
13	Fertilizer Application	28	50
14	Service Receipt	29	50
15	Shrub/Perennial Installation	30	100

Skills Event 1

PLANT LAYOUT SCORECARD

 Name(s) State Team Number

Criteria	Points Possible	Points Earned
Plant placed within 6 inches +/- of correct placement (5 points each)	20	
Plant faced properly (5 points each)	20	
Plant handled properly (5 points each)	10	
Correct Viewpoint	5	
Explain Plant Care	5	
Safely and properly followed lifting procedures (5 pts per student)	10	
Safety glasses worn (5 pts per student)	10	
Gloves worn	10	
Completed Design	10	
TOTAL POINTS EARNED OUT OF 100 POSSIBLE		

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Skills Event 3

IRRIGATION ZONE INSTALLATION AND REPAIR SCORECARD

Name(s) _____

State _____

Team Number _____

Criteria	Points Possible	Points Earned
Properly Repair Lateral Break		
Removed damaged section of pipe	5	
Removed any burrs or rough edges and cleaned surface	5	
Applied primer and cement properly and cleaned up excess glue	5	
Fittings to be properly set or extended	10	
Installation of Irrigation Zone		
Pipe cut to proper length +/- 1 inch (5 points deducted for each error)	20	
Proper fitting used (5 points deducted for each error)	15	
Heads set in proper location	10	
Heads adjusted properly (5 points per ??)	15	
Safety Procedures		
Eye protection used (5 points per student)	10	
Gloves used while cutting pipe and gluing	5	
TOTAL POINTS EARNED OUT OF 100 POSSIBLE		

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Skills Event 4

LINE TRIMMER SCORECARD

 Name(s)

 State

 Team Number

Criteria	Point Possible	Points Earned
Pre-Operation Check		
Checked air filter and explained	2	
Checked fuel level and filled on hard surface	3	
Equipment Operation		
Installed trimmer line into Trimmer Head	4	
Demonstrated how to start engine with Trimmer on ground	2	
Demonstrated how to trim around posts without hitting post	5	
Safety Procedures		
Ear protection used	3	
Eye protection used	3	
Avoided pedestrian traffic while trimming <i>(Judge is pedestrian)</i>	25	
TOTAL POINTS EARNED OUT OF 25 POSSIBLE		

Judge's Comments

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Skills Event 5

CHAINSAW SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Point Earned
Pre-Operation Check		
Located and checked air filter	3	
Adjusted chain tension with gloves on	7	
Checked bar oil level and explained its purpose	5	
Demonstrated fueling of tank with proper fuel	2	
Equipment Operation		
Demonstrated how to start engine, choke and set chain brake with saw on the ground	8	
Demonstrated how to cut a log on a saw buck	5	
Safety Procedures (All PPE must be on before attempting this event)		
Ear protection used	4	
Eye protection used	4	
Chaps used	4	
Hard hat used	4	
Gloves used	4	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

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Skills Event 6

EDGER SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Pre-Operation Check		
Checked air filter	2	
Checked fuel level and filled on a hard surface	3	
Changed edger blade	3	
Equipment Operation		
Demonstrated how to start engine with edger on the ground	2	
Demonstrated how to edge a sidewalk on a section of lumber	5	
Safety Procedures		
Ear protection used	3	
Eye protection used	4	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	3	
TOTAL POINTS EARNED OUT OF 25 POSSIBLE		

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Skills Event 7

POWER BLOWER SCORECARD

Name(s)

State

Team Number

Criteria	Points Possible	Points Earned
Pre-Operation Check		
Checked air filter and fan grill	2	
Checked fuel level and fill on a hard surface and discuss 2-cycle mix	3	
Equipment Operation		
Cleaned up hazards before blowing area	3	
Demonstrated how to start engine with blower on the ground	2	
Explained how to blow debris away from building	3	
Explained proper clearing of the sidewalk	2	
Safety Procedures		
Ear protection used	3	
Eye protection used	2	
Dust mask used while blowing	2	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	3	

TOTAL POINTS EARNED OUT OF 25 POSSIBLE

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Skills Event 9

PUSH MOWER SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Pre-Start Procedures		
Checked oil level and air cleaner	5	
Changed mower blade	9	
Mower guard down or bag in place	5	
Adjusted mower height	5	
Equipment Operation		
Demonstrated/Explained how: Two times outside area	3	
Demonstrated/Explained how: Mowed around trees on left side of mower	3	
Safety Procedures		
Ear protection used	5	
Eye protection used	5	
Hazards were observed and cleaned up before mowing	5	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

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Skills Event 10

ZTR MOWER SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Pre-Start Procedures		
Checked oil level	5	
Checked hydraulic system oil level check	2	
Checked air cleaner and grease fittings	3	
Checked Belts, pulleys, guards	3	
Adjusting mower height	5	
Equipment Operation		
Sat on mower before starting	6	
Demonstrated/Explained how: Two times outside area	3	
Demonstrated/Explained how: Mowed around trees on left side of mower	3	
Safety Procedures		
Ear protection used	5	
Eye protection used	5	
Hazards were cleaned up before mowing	5	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

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Skills Event 11

INTERMEDIATE WALK-BEHIND MOWER SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Pre-Start Procedures		
Checked oil level	5	
Checked hydraulic system oil level check	2	
Checked air cleaner and grease fittings	3	
Checked belts, pulleys, guards	3	
Adjusted mower height (physically change)	5	
Equipment Operation		
Started mower properly (demonstrate)	6	
Two times outside area (discuss while looking at a site design)	3	
Mowed around trees on left side of mower (discuss while looking at a site design)	3	
Safety Procedures		
Eye protection used	5	
Ear protection used	5	
Cleaned up hazards before mowing	5	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

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Skills Event 12

SOD INSTALLATION SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Calculated and weighed proper amount of fertilizer	10	
Applied fertilizer evenly (<i>round down to the nearest pound</i>)	10	
Sodded strips adjacent to edges full width	10	
Knitted seams tightly	15	
Made cuts accurately, used proper tool, i.e. spade, knife	15	
Explained watering of new sod	15	
Eye protection used	10	
Demonstrated proper lifting techniques	5	
<i>Additional safety violations: Deduct 3 points for each observed safety violation such as tools used improperly, etc. (Maximum deduction – 15 points)</i>		
Completed sodding the box	10	
TOTAL POINTS EARNED OUT OF 100 POSSIBLE		

Judge's Comments

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Skills Event 13

TREE PLANTING SCORECARD

Name(s) _____

State _____

Team Number _____

Criteria	Points Possible	Points Earned
Hole Dimension According to Detail		
Width	10	
Depth	10	
Planted According to Detail		
Root pruning	5	
Handled correctly	5	
Soil berm	5	
Tamped properly	5	
Mulched properly	5	
Explained watering method for new tree	15	
Stake and Wire tree according to specifications sheet		
Stakes at correct depth	5	
Stakes straight and plumb	5	
Stakes placed per prevailing wind	5	
Straps installed at correct height	5	
Safety Procedures		
Eye protection used	5	
Proper lifting techniques were used	5	
Proper use of gloves while staking the tree	5	
Wore hard hat while staking the tree	5	
<i>Additional safety violations: Deduct 3 points for each observed safety violation, such as tools used improperly, etc.</i>		
TOTAL POINTS EARNED OUT OF 100 POSSIBLES		

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Skills Event 17

PRUNING SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Identified trunk, leader and lateral branches	15	
Properly used hand pruners on plants	10	
Properly used loppers on plants	10	
Demonstrated the 3-point cut method and provided rationale on a design	10	
Identified 3 appropriate cuts and proper tool to use	15	
Demonstrated how to start and handle gas-powered hedge shears	10	
Eye protection used	10	
Ear protection used	10	
Gloves used	5	
Chaps used while shearing	5	
<i>Note: Deduct 10 points for any safety violation — maximum of 20 points deducted.</i>		
TOTAL POINTS EARNED OUT OF 100 POSSIBLE		

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Skills Event 18

FERTILIZER APPLICATION SCORECARD

Name(s)

State

Team Number

CRITERIA	Points Possible	Points Earned
Checked equipment spinner for proper operation before filling	5	
Adjusted spreader setting as instructed	2	
Measured the proper amount of fertilizer +/- 5 percent	13	
Filled spreader off of turf area	5	
No fertilizer spillage and spreader was closed prior to filling	5	
Opened spreader at appropriate time	5	
Spread fertilizer evenly	5	
Safety Procedures		
Eye protection used	5	
Gloves used	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

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Skills Event 19

SERVICE RECEIPT SCORECARD

Name(s)

State

Team Number

Criteria	Points Possible	Points Earned
Recorded crew time properly per scenario provided	10	
Checked off all services rendered	5	
Recorded actual pre-emergent herbicide and fertilizer calculations	5	
Recorded actual mulch calculation (<i>in cubic yards</i>)	5	
Recorded actual flats installed	5	
Recorded comments about irrigation head	5	
Explained annual care to client	10	
Crew leader signed off on service receipt	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

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Skills Event 21

SHRUB/PERENNIAL INSTALLATION SCORECARD

Name(s)

State

Team Number

Criteria	Points Possible	Points Earned
Plants placed within 2" +/- of correct placement (5 points each)	15	
Plants faced properly to a maximum of 15 points (5 points each)	15	
Plant handled properly to a maximum of 15 points (5 points each)	15	
Correct viewpoint	5	
Explained proper plant care (watering- 5 points and pruning - 5 points)	10	
Mulch applied properly	10	
Safely and properly followed lifting procedures	10	
Safety glasses and gloves used	10	
Finished planting per design	10	
TOTAL POINTS EARNED OUT OF 100 POSSIBLE		

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