



Nursery/Landscape

Purpose

The purpose of the National 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

- Official FFA Dress is not required for this event.
- Coaches may accompany participants to the event site but must leave the area at the start of the event. At the conclusion of all event components, the superintendent will announce when participants, visitors and coaches may enter the competition area to review the materials and organization.
- 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.

Event Format

Each participant must have the following individual tools for the competition:

- A clean clipboard
- At least two No. 2 pencils
- A calculator — Calculators used in this event should be battery-operated, nonprogrammable and silent with large keys and displays. Calculator functions should be limited to: addition, subtraction, multiplication, division, equals, percent, square root, +/- key and one memory register. No other calculators may be used during the event.

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. 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.
- Asexual propagation

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. 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*

Phase 1-B: Team Cooperation (50 team points)

This practicum is designed to evaluate how well the participants organize and work together in planning and accomplishing each task in the Team Skills in the allotted time. This will be scored by a judge who will observe the team while Team Skills instructions are given and throughout the completion of all Skill assignments.

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 questions will be pulled from a test bank from the last five years of National FFA Nursery and Landscape exams.

Phase 3: Identification of Plants, Pests, Disorders, and Beneficial Insect (150 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 and scratch paper 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 6: Nursery Propagation or Potting (50 points)

This practicum is designed to evaluate participant knowledge of and ability in performing 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, if desired. 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, if desired. 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. Following completion of the assigned practicum, the official will ask questions regarding the propagation or potting activity. 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 members scores plus the group portion of the team skills challenge. Possible points are as follows:

Phase	Individual Points	Team Points
1. General knowledge exam	150	600
2. Identification	150	600
3. Landscape estimating	100	400
4. Nursery propagation/potting	50	200
5. Team Skills Challenge		200-400
o Team Cooperation		50
POINT TOTALS	450	2,050-2,250

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 Identification exam score
- 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. 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.: Delmar Cengage Learning. ISBN 9781435480391
- Ornamental Horticulture. Current edition. Jack Ingels. Delmar Publishers Inc., Albany, N.Y. ISBN-13: 9781435498167
- Introduction to Plant and Soil Science and Technology. (Current edition.) Ronald J. Biondo and Jasper S. Lee. Prentice-Hall, Inc., Englewood Cliffs, N.J. ISBN 0813432162

LANDSCAPE

- Landscaping Principles and Practices. (Current edition.) Jack Ingels. Delmar Publishers Inc., Albany, N.Y. ISBN 13: 9781428376410
- Landscaping Construction. (Current edition.) David Sauter. Delmar Publishers Inc., Albany, N.Y. ISBN 143549718X
- Introduction to Landscaping: Design, Construction, and Maintenance. (Current edition.) Ronald J. Biondo and Charles B. Schroeder. Prentice-Hall, Inc., Englewood Cliffs, N.J. ISBN 0133626385
- 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/AllBooks/SET_0050.aspx

TURF

- Turfgrass Science and Management. (Current edition.) Robert D. Emmons. Delmar Publishers Inc., Albany, N.Y. ISBN 10: 1418013307
- Turfgrass Management. (Current edition.) A.J. Turgeon. Prentice-Hall, Inc. Boston. ISBN 0137074352

NURSERY

- Plant Propagation: Principles and Practices. (Current edition.) Hudson T. Hartmann, Fred T. Davies, Jr., Dale E. Kester, and Robert L. Genieve. Prentice Hall, Boston. ISBN 0135014492
- American Standard for Nursery Stock. (Current edition.) American Association of Nurserymen, Inc., 1250 I St., NE, Suite 500, 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. Prentice-Hall, Inc., Englewood Cliffs, N.J. ISBN 0135038669
- Landscape Design: A Practical Approach. (Current edition.) Leroy G. Hannebaum. PrenticeHall, Inc., Upper Saddle River, N.J. ISBN 0130105813
- Manual of Woody Landscape Plants. (Current edition.) Michael A. Dirr. Stipes Publishing Co., Champaign, Ill. ISBN 978-1-58874-868-3

- A Field Guide to Woody Landscape Plants of the Southeast. (Current edition.) Rex Bishop. Tea Olive Productions. Marietta, Ga. ISBN 097253430X
- Nursery Management: Administration and Culture. (Current edition.) Harold Davidson, Roy Mecklenburg, and Curtis Peterson. Prentice-Hall, Upper Saddle River, N.J. ISBN 0138579962
- Landscape Plants, Their Identification, Culture, and Use. (Current edition.) Ferrell M. Bridwell. Delmar Thomson Learning, Albany, N.Y. ISBN 0766836347
- 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
- The Turf Problem Solver: Case Studies and Solutions for Environmental, Cultural, and Pest Problems. (Current edition.) A.J. Turgeon and J.M. Vargas, Jr. J. Wiley, Hoboken, N.J. ISBN 9780471736196.

TRADE PERIODICALS

1. American Nurseryman. American Nurserymen Publishing Co., Chicago, Ill., <http://www.amerinursery.com/>
2. Turf Magazine plus several other on-line titles. Moose River Media LLC., www.turfmagazine.com/

INDUSTRY CATALOGS

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

WEBSITES AND PROBLEM SAMPLES

Visit the National FFA website at FFA.org for information on career development events, access to prior-year event materials and links to additional study aids. Additional links and resources will be included as they are developed or identified, along with the following links of the CDE sponsors:

- 101 <http://www.stihlusa.com/information/>
- 102 <http://www.kubota.com>
- 103 <http://www.arysta-na.com>
- 104 <http://www.treefund.org>
- 105 <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>Echinacea 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>Festuca spp. and cv.</i>	Fescue
132	<i>Ficus benjamina</i>	Benjamin Fig
133	<i>Ficus elastica 'Decora'</i>	Decora Rubber Plant
134	<i>Forsythia x intermedia cv.</i>	Border Forsythia

No.	Botanical Name	Common Name
135	<i>Fraxinus American cv.</i>	White Ash
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 arbicola</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>Leucanthemum x superbum cv.</i>	Shasta Daisy
159	<i>Liquidambar styraciflua</i>	Sweet Gum
160	<i>Liriodendron tulipifera</i>	Tuliptree
161	<i>Liriope spp. cv.</i>	Lilyturf
162	<i>Lonicera japonica 'Halliana'</i>	Hall's Japanese Honeysuckle
163	<i>Magnolia grandiflora cv.</i>	Southern Magnolia
164	<i>Magnolia x soulangiana cv.</i>	Chinese (Saucer) Magnolia
165	<i>Mahonia aquifolia cv.</i>	Oregon Grape
166	<i>Malus spp. and cv.</i>	Flowering Crabapple
167	<i>Miscanthus sinensis cv.</i>	Miscanthus grass
168	<i>Myrica pensylvanica</i>	Bayberry

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

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

Pests, Disorders and Beneficial Insects Identification

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

No.	Item Name
Weeds	
237	Annual Bluegrass
238	Broadleaf Plantain
239	Buckhorn Plantain
240	Chickweed
241	Crabgrass
242	Dandelion
243	Henbit
244	Nutsedge
245	Oxalis
246	Purslane
247	Clovers
Physiological Problems	
248	Frost/Freeze Injury
249	Iron Deficiency
250	Leaf Scorch (drought/winter burn)
251	Nitrogen Deficiency
252	Pot-Bound Roots
253	String Trimmer Injury
254	2,4-D Injury
Beneficial Insects	
255	Praying Mantis
256	Lady Beetle
257	Paper Wasp
258	Lacewing
259	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 unstabled.	Growing media is left very low or completely fills pot, media was improperly settled leaving the plant unstabled.	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	
	5-6 points	2-4points	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	X 1	
	5-6 points	2-4 points	1-0 points	Weight	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 _____
Judges please award points as whole numbers only, no fractions

Team Activity Cooperation/Teamwork Rubric

50 POINTS

Chapter _____

State _____

Team Number _____

Indicator	Very strong evidence of skill is present 5-4 points	Moderate evidence of skill is present 3-2 points	Weak evidence of skill is present 1-0 points	Weight	Points Earned
Understanding of task(s) assigned	Clearly all members show understanding of the assigned task(s).	Two to three members show understanding of the assigned task(s).	One member shows understanding of assigned task(s).	X 2	
A leader for the team is chosen	All four members are involved in choosing a leader.	Two to three members are involved in choosing a leader.	One member decides they will be the leader.	X 2	
Agreement reached among team members on who will do which skills.	All four members have task responsibilities outlined and defined.	Two or three members have task responsibilities outlined and defined.	One member has have task responsibilities outlined and defined.	X 2	
A plan is made on how to complete tasks if difficulties arise.	Team discussed who would assist whom to make sure tasks are completed.	Leader of the team assigns who will help others complete tasks.	No plan is made for assisting others to complete tasks.	X 2	
Willingness to help others in accomplishing task	All members willing to assist others.	Three members willing to assist others.	Two or less members willing to assist others.	X 2	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE					

Judge's Name _____

Judge's Signature _____

Date _____

Nursery/Landscape Team Skills Challenge

200-400 POINTS (POINT VALUE DETERMINED BASED ON SKILLS CHOSEN)

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
Total Points		of 200 or 400 Points Possible

Judge's Name

Judge's Signature

Date

Skill Number	Skill Title	Points
1	Plant Layout	100
2	Irrigation Zone Installation and Repair	100
3	Line Trimmer	50
4	Chainsaw	50
5	Edger	50
6	Power Blower	50
7	Push Mower	50
8	Sod Installation	100
9	Tree Planting	100
10	Pruning	100
11	Fertilizer Application	50
12	Service Receipt	50
13	Shrub/Perennial Installation	100

Skills Event 1

PLANT LAYOUT SCORECARD

Name(s) _____ State _____ Team Number _____

Criteria	Points Possible	Points Deducted	Points Earned
Placement of Plant Material			
Plant placed within 6 inches +/- of correct placement (5 points each)	20		
Facing of Plant Material			
Plant faced properly (5 points each)	20		
Handling of Plant Material			
Plant handled properly (5 points each)	10		
Correct Viewpoint	5		
Explain Plant Care	5		
Safety Procedures			
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			

Judge's Comments

Judge's Name _____ Judge's Signature _____ Date _____

Skills Event 2

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		

Judge's Comments

Judge's Name _____

Judge's Signature _____

Date _____

Skills Event 3

LINE TRIMMER SCORECARD

 Name(s) _____ State _____ Team Number

Criteria	Point Possible	Points Earned
Pre-Operation Check		
Checked air filter and explained	10	
Checked fuel level and filled on hard surface	10	
Equipment Operation		
Installed trimmer line into Trimmer Head	10	
Demonstrated how to start engine with Trimmer on ground	10	
Safety Procedures		
Ear protection used	5	
Eye protection used	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

Judge's Comments

 Judge's Name _____ Judge's Signature _____ Date

Skills Event 4

CHAINSAW SCORECARD

Name(s)

State

Team Number

Criteria	Points Possible	Points Earned
Pre-Operation Check		
Located and checked air filter	5	
Adjusted chain tension with gloves on	5	
Checked bar oil level and explained its purpose	5	
Demonstrated fueling of tank with proper fuel	5	
Equipment Operation		
Demonstrated how to start engine, choke and set chain brake with saw on the ground	10	
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		

Judge's Comments

Judge's Name

Judge's Signature

Date

Skills Event 5

EDGER SCORECARD

 Name(s) _____ State _____ Team Number

Criteria	Points Possible	Points Earned
Pre-Operation Check		
Checked air filter	5	
Checked fuel level and filled on a hard surface	5	
Changed edger blade	10	
Equipment Operation		
Demonstrated how to start engine with edger on the ground	10	
Safety Procedures		
Ear protection used	7	
Eye protection used	7	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	6	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

Judge's Comments

 Judge's Name _____ Judge's Signature _____ Date

Skills Event 6

POWER BLOWER SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Earned
Pre-Operation Check		
Checked air filter and fan grill	5	
Checked fuel level and fill on a hard surface	5	
Equipment Operation		
Cleaned up hazards before blowing area	5	
Demonstrated how to start engine with blower on the ground	5	
Blew debris away from building	5	
Demonstrated proper clearing of the sidewalk	5	
Safety Procedures		
Ear protection used	5	
Eye protection used	5	
Dust mask used while blowing	5	
Avoided pedestrian traffic (<i>Judge is pedestrian</i>)	5	

TOTAL POINTS EARNED OUT OF 50 POSSIBLE

Judge's Comments

 Judge's Name

 Judge's Signature

 Date

Skills Event 7

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		
Two times outside area	3	
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		

Judge's Comments

 Judge's Name

 Judge's Signature

 Date

Skills Event 8

SOD INSTALLATION SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Deducted	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	15		
Explained watering of new sod	15		
Safety Procedures			
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.</i>			
Completed sodding the box	10		
TOTAL POINTS EARNED OUT OF 100 POSSIBLE			

Judge's Comments

 Judge's Name

 Judge's Signature

 Date

Skills Event 9

TREE PLANTING SCORECARD

Name(s) _____

State _____

Team Number _____

Criteria	Points Possible	Points Deducted	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	10		
Proper lifting techniques were used	5		
Proper use of gloves 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			

Judge's Comments

Judge's Name _____

Judge's Signature _____

Date _____

Skills Event 10

PRUNING SCORECARD

Name(s)

State

Team Number

Criteria	Points Possible	Points Deducted	Points Earned
Tree Structure			
Identified trunk, leader and lateral branches	15		
Pruning Tools and Methods			
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		
Tree Pruning			
Identified 3 appropriate cuts and proper tool to use	15		
Shrub Pruning			
Demonstrated how to start and handle gas-powered hedge shears	10		
Safety Procedures			
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			

Judge's Comments

Judge's Name

Judge's Signature

Date

Skills Event 11

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	5	
Measured the proper amount of fertilizer +/- 5 percent	15	
Filled spreader off of turf area	10	
No fertilizer spillage and spreader was closed prior to filling	5	
Safety Procedures		
Eye protection used	5	
Gloves used	5	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE		

Judge's Comments

 Judge's Name

 Judge's Signature

 Date

Skills Event 12

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		

Judge's Comments

 Judge's Name _____ Judge's Signature _____ Date

Skills Event 13

PERENNIAL INSTALLATION SCORECARD

 Name(s)

 State

 Team Number

Criteria	Points Possible	Points Deducted	Points Earned
Placement of Plant Material			
Plants placed within 2" +/- of correct placement (5 points each)	15		
Facing of Plant Material			
Plants faced properly to a maximum of 15 points (5 points each)	15		
Handling of Plant Material			
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		
Safety Procedures and Proper Lifting of Plants			
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			

Judge's Comments

 Judge's Name

 Judge's Signature

 Date

