

Tennessee FFA Association

**Nursery/
Landscape
Handbook
2017-2021**

Event 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

- **Nursery/Landscape Principles:** To apply nursery and landscape principles and practices as they impact residential, commercial, public and recreational applications.
- **Plant Materials:** To 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:** To demonstrate the ability to identify unhealthy plant conditions due to pests, nutritional/physiological disorders and mechanical/chemical injury.
- **Cultural Practices:** To 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:** To demonstrate knowledge of the principles and techniques of landscape design, estimating and construction.
- **Supplies and Equipment:** To 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:** To demonstrate knowledge of safety practices in nursery and landscape operations.
- **Interpersonal Relations:** To demonstrate skills in oral and written business communications.
- **Business Management:** To demonstrate an understanding of marketing principles and business management as well as proper sales and service skills.
- **Records and Reports:** To demonstrate the ability to prepare estimates and complete financial statements.

Event Rules

- Each team will be comprised of four team members. The four individual scores and the team activity and skills challenge scores will be used to determine the final team score.
- FFA Official Dress is NOT required. It is highly recommended that the team should dress in appropriate “work clothing”.
- 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 certain practicums.
- Any participant in possession of an electronic device other than a calculator and electronic speller, in the event area is subject to disqualification.

Event Format

Each participant must have the following individual tools the competition:

- A clear, transparent clipboard with no notes.
- At least two No. 2 pencils
- A ball-point or felt-tip pen
- A non-programmable calculator
 - Calculators used in this event should be battery operated, nonprogrammable and silent with large keys and large displays. Calculators may have only these functions: addition, subtraction, multiplication, division, equals, percent, square root, +/- key and one memory register. No other calculators are allowed to be used during the event.
- An architect’s scale
- An engineer’s scale

Additional items allowed but not required, include the following:

- A pocket-size dictionary or electronic speller and a hand pruner or knife.
- Teams may also be requested to supply one or more laptop computers. Coaches will be notified if laptops are needed in advance.

TEAM INTERACTIVE EVENTS

PHASE 1: TEAM ACTIVITY (50 POINTS PER CONTESTANT PLUS 100 TEAM POINTS)

This practicum involves team members working together to accomplish an assignment. It is designed to evaluate individual and group contributions in coordination and cooperation of knowledge, evaluation and decision-making. The team activity has two parts, described below.

Team Preparation

- The team members work as a group in evaluating a landscape or nursery business situations (production, service, personnel, business operations/relations) or educational programming, as in the following general themes: promotions, startup business plan, consulting, customer service, service-learning or community involvement. The team will have 30 minutes for preparation. Notepaper and other supplies, including computer resources that may be appropriate for the situation, will be available. References will not be needed beyond what is provided for this preparation section. Judge(s) will be observing and scoring teamwork during this time but will not interact with the team. If needed, the team may ask the judge(s) basic questions about the assignment or materials provided.

Team Presentation

- Each of the team members will participate in the verbal presentation to a judge(s) based on decisions made during the preparation. The team will have 15 minutes for the presentation and interaction with the judge(s). The presentation format is informal and the conversation will be as if at a conference table, not a speech prepared with visual aids. Division of the time and organization of the presentations is at the team's discretion. The judge(s) may ask questions of the team members during this time. Information will be provided to the team on the judge's role as a business client, supervisor or other appropriate party to facilitate the dialogue.
- Scoring criteria for the team preparation and presentation portions are given on the "Team Activity" scorecards. Individual components from each phase have a value of 50 points added to the individual's score, while the team components of both phases have a value of 100 points added to the composite team score.

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. All test questions will come from the previous five years National Nursery/Landscaping General Knowledge Exams located on FFA.ORG. A test bank of the five past years' national exams will be maintained on the Downloads page of tnffa.org and updated annually.

PHASE 3: IDENTIFICATION OF PLANTS, PESTS, DISORDERS, BENEFICIAL INSECTS, EQUIPMENT AND SUPPLIES (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.
- Equipment and supplies will be either an intact item or photograph.
- 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:

- 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.

NOTE – ONLY ONE PHASE BETWEEN PHASE 5 AND 6 WILL BE CONDUCTED AT THE STATE EVENT. THE EVENT SUPERINTENDENT WILL DETERMINE WHICH EVENT WILL BE CONDUCTED.

PHASE 5: VERBAL CUSTOMER ASSISTANCE (50 POINTS PER CONTESTANT)

This interpersonal relations practicum is designed to evaluate participant knowledge of and ability in:

- Verbal communication.
- Sales and customer assistance skills.
- Plant materials, plant culture and problems.
- Nursery and landscape supplies and equipment.

The participant will assume the role of a business customer service representative (garden center or other related business or an educational agency) responding to an assistance need of the customer or client (the judge). General themes might include, but are not limited to, the following: clinical diagnosis or recommendations; care advice; sales of plants, equipment, treatments; deal with complaints.

Each participant will be located at a separate station with one minute allotted to review the materials and information provided prior to arrival of the judge. These materials may be handled and referred to as appropriate for the conversation with the judge. Plants, disorders, supplies not listed on the material and plant resource lists will be communicated prior to the event. Scoring criteria are listed on the respective scorecard.

PHASE 6: WRITTEN CUSTOMER ASSISTANCE (50 POINTS PER CONTESTANT)

This interpersonal relations practicum has the same objectives as in Phase 6: Verbal Customer Assistance applied to written communication.

- Written communication
- Sales and customer assistance skills
- Plant material, plant culture and problems
- Nursery and landscape supplies and equipment

The participant will assume the role of a customer service representative or the representative of an education agency, such as the extension service. A copy of correspondence about a plant, landscape or business question will be provided, along with the appropriate response information. Each participant will compose an appropriate response in handwritten or electronic format. Thirty minutes will be allowed for this practicum. Scoring criteria are

presented on the “Written Customer Assistance Scorecard”.

PHASE 7: 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. Judges will ask clarifying questions of the students.

- **Propagating Nursery Stock:** Each participant will be furnished 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 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 FIVE individual phases of the event. Only one phase between phases 5 and 6 will be conducted at the state event. The CDE superintendent will determine which phase will be completed.

Team scores are the sum of all members' scores plus the group portion of the team activity. Possible points are as follows:

PHASE	Member	Team
1A. Team Activity – Individual	50	200
1B. Team Activity – Group		100
2. General Knowledge Exam	150	600
3. Identification	150	600
4. Landscape Estimating	100	400
5. Verbal Customer Assistance	50	200
6. Written Customer Assistance	50	200
7. Nursery Propagation/Potting	50	200
Individual Total	550	
TEAM TOTAL		2,300

TIEBREAKERS

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

1. General Knowledge Exam
2. Identification
3. Landscape Estimating

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

1. Team Activity Total
2. Team Preparation and Presentation scores
3. Team General Knowledge Exam score

References

The following list of references is a guide to team training.

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 event. References other than those listed may be equally valuable resources, along with the many video and computer-based training aids available.

NATIONAL FFA CORE CATALOG

- Nursery/Landscape CDE materials: <http://shop.ffa.org>
- CDE Q&A's: *FFA.org*

GENERAL REFERENCES

- Previous five years National Written Exams located at FFA.ORG
- 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, NJ. ISBN 0130364134
- Introductory Horticulture. Current edition. H. Edward Reiley and Carroll L. Shry, Jr. Clifton Park, NY: Delmar Cengage Learning. ISBN 9781435480391
- Ornamental Horticulture. Current edition. Jack Ingels. Delmar Publishers Inc., Albany, NY. 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, NJ. ISBN 0813432162

LANDSCAPE

- Landscaping Principles and Practices. Current edition. Jack Ingels. Delmar Publishers Inc., Albany, NY. ISBN 13: 9781428376410
- Landscaping Construction. Current edition. David Sauter. Delmar Publishers Inc., Albany, NY. ISBN 143549718X
- Introduction to Landscaping: Design, Construction, and Maintenance. Current edition.

Ronald J. Biondo and Charles B. Schroeder. Prentice-Hall, Inc., Englewood Cliffs, NJ. 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 <http://www.landscapetechnician.net>

TURF

- Turfgrass Science and Management. Current edition. Robert D. Emmons. Delmar Publishers Inc., Albany, NY. 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 http://americanhort.org/documents/ANSI_Nursery_Stock_Standards_AmericanHort_2014.pdf)

SECONDARY REFERENCES

- Practical Horticulture. Current edition. Laura W. Rice and Robert P. Rice. Prentice-Hall, Inc., Englewood Cliffs, NJ. ISBN 0135038669
- Landscape Design: A Practical Approach. Current edition. Leroy G. Hannebaum. PrenticeHall, Inc., Upper Saddle River, NJ. ISBN 0130105813
- Manual of Woody Landscape Plants. Current edition. Michael A. Dirr. Stipes Publishing Co., Champaign, IL. 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, NJ. ISBN 0138579962
- Landscape Plants, Their Identification, Culture, and Use. Current edition. Ferrell M. Bridwell.

Delmar Thomson Learning, Albany, NY. 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, OK. ISBN 0961310910
- Manual of Herbaceous Ornamental Plants. Current edition. Steven M. Still. Stipes Publishing Co., Champaign, IL. 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, IL. ISBN 978-1-58874-868-3.
- Landscape Construction Procedures, Techniques, and Design. Current edition. Floyd Giles. Stipes Publishing Co., Champaign, IL. 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, NJ. ISBN 9780471736196.

TRADE PERIODICALS

- American Nurseryman. American Nurserymen Publishing Co., Chicago, IL.
<http://www.amerinursery.com/>
- Grounds Maintenance. Primedia, Overland Park, KS., www.grounds-mag.com/
- Turf Magazine, plus several other on-line titles. Moose River Media LLC.
www.turfmagazine.com/
- Interiorscape.com: A Forum for Interior Plantscape Professionals. www.interiorscape.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 <http://www.amleo.com/index1.html>)
- Hummert International, 4500 Earth City Expressway, Earth City, Mo. 63045, 800-325-3055 /phone <https://www.hummert.com>

WEBSITES AND PROBLEM SAMPLES

Visit the National FFA website at <http://www.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:

- <http://www.stihlusa.com/information/>
- <http://www.kubota.com>
- <http://www.arysta-na.com>
- <http://www.treefund.org>
- <https://www.landscapeprofessionals.org/>

Nursery/Landscape Plant Identification

NAME

MEMBER NUMBER

CHAPTER

STATE

No.	Botanical Name	Common Name
101	<i>Abelia x grandiflora</i>	Glossy Abelia
102	<i>Abies concolor</i>	White Fir
103	<i>Acer palmatum cv.</i>	Japanese Maple
104	<i>Acer platanoides cv.</i>	Norway Maple
105	<i>Acer rubrum cv.</i>	Red Maple
106	<i>Acer saccharum cv.</i>	Sugar Maple
107	<i>Ajuga reptans cv.</i>	Carpet Bugle
108	<i>Antirrhinum majus cv.</i>	Snapdragon
109	<i>Aquilegia x hybrida cv.</i>	Columbine
110	<i>Amelanchier arborea</i>	Downy Serviceberry
111	<i>Astilbe hybrid cv.</i>	Astilbe
112	<i>Begonia semperflorens-cultorum</i>	Wax Begonia
113	<i>Berberis x mentorensis</i>	Mentor Barberry
114	<i>Betula nigra</i>	River Birch
115	<i>Brassaia actinophylla</i>	Schefflera, Octopus Tree
116	<i>Buxus microphylla cv.</i>	Littleleaf Boxwood
117	<i>Camellia japonica cv.</i>	Common Camellia
118	<i>Cedrus atlantica 'Glauca'</i>	Blue Atlas Cedar
119	<i>Cercis canadensis</i>	Redbud
120	<i>Chaenomeles speciosa cv.</i>	Japanese (Flowering) Quince
121	<i>Clematis hybrid</i>	<i>Clematis</i>
122	<i>Cornus florida cv.</i>	Flowering Dogwood
123	<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
124	<i>Cotoneaster divaricatus</i>	Spreading Cotoneaster
125	<i>Crataegus phaenopyrum</i>	Washington Hawthorn
126	<i>Cynodon dactylon cv</i>	Bermudagrass
127	<i>Dieffenbachia maculata cv.</i>	Spotted Dumb Cane
128	<i>Dracaena deremensis 'Warneckii'</i>	Striped Dracaena
129	<i>Dracaena fragrans 'Massangeana'</i>	Corn Plant
130	<i>Echinaceae purpurea</i>	Purple Coneflower
131	<i>Epipremnum spp.</i>	Pothos

No.	Botanical Name	Common Name
132	<i>Euonymus alatus</i>	Winged Euonymus
133	<i>Euonymus fortunei cv.</i>	Wintercreeper
134	<i>Fagus sylvatica cv.</i>	European Beech
135	<i>Festuca spp. and cv.</i>	Fescue
136	<i>Ficus benjamina</i>	Benjamin Fig
137	<i>Ficus elastica 'Decora'</i>	Decora Rubber Plant
138	<i>Forsythia x intermedia cv.</i>	Border Forsythia
139	<i>Fraxinus americana cv.</i>	White Ash
140	<i>Gaillardia aristata cv.</i>	Common Blanketflower
141	<i>Gardenia jasminoides 'Fortuniana'</i>	Common Gardenia
142	<i>Ginkgo biloba</i>	Ginkgo, Maidenhair Tree
143	<i>Gleditsia triacanthos inermis cv.</i>	Thornless Honeylocust
144	<i>Hedera helix cv.</i>	English Ivy
145	<i>Heimerocallis spp. and cv.</i>	Day lily
146	<i>Hosta x hybrida cv.</i>	Plaintain Lily
147	<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea
148	<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea
149	<i>Ilex cornuta cv.</i>	Chinese Holly
150	<i>Ilex crenata cv.</i>	Japanese Holly
151	<i>Ilex x meserveae cv.</i>	Meserve Holly
152	<i>Impatiens hybrid cv.</i>	Impatiens
153	<i>Iris x germanica florentina cv.</i>	Bearded Iris
154	<i>Juniperus chinensis cv.</i>	Chinese Juniper
155	<i>Juniperus horizontalis cv.</i>	Creeping Juniper
156	<i>Lagerstroemia indica cv.</i>	Crape Myrtle
157	<i>Leucanthemum x superbum cv.</i>	Shasta Daisy
158	<i>Liquidambar styraciflua</i>	Sweet Gum
159	<i>Liriodendron tulipifera</i>	Tuliptree
160	<i>Liriope spp. cv.</i>	Lilyturf
161	<i>Lonicera japonica 'Halliana'</i>	Hall's Japanese Honeysuckle
162	<i>Magnolia grandiflora cv.</i>	Southern Magnolia

No.	Botanical Name	Common Name
163	<i>Magnolia x soulangiana</i> cv.	Chinese (Saucer) Magnolia
164	<i>Mahonia aquifolia</i> cv.	Oregon Grape
165	<i>Malus spp. and cv.</i>	Flowering Crabapple
166	<i>Myrica pensylvanica</i>	Bayberry
167	<i>Nandina domestica</i>	Heavenly Bamboo
168	<i>Narcissus pseudonarcissus</i> cv.	Daffodil
169	<i>Nyssa sylvatica</i>	Sour (Black) Gum
170	<i>Pachysandra terminalis</i>	Japanese Spurge
171	<i>Paeonia hybrid</i> cv.	Peony
172	<i>Parthenocissus tricuspidata</i>	Boston Ivy
173	<i>Pelargonium x hortorum</i> cv.	Zonal Geranium
174	<i>Pennisetum ruppelia</i>	Fountain Grass
175	<i>Petunia x hybrida</i> cv.	Petunia
176	<i>Philodendron scandens oxycardium</i>	Heartleaf Philodendron
177	<i>Picea abies</i>	Norway Spruce
178	<i>Picea pungens</i> cv.	Colorado (Blue) Spruce
179	<i>Pieris japonica</i>	Lily-of-the-Valley Bush
180	<i>Pinus mugo</i>	Mugo Pine
181	<i>Pinus strobus</i>	Eastern White Pine
182	<i>Pinus sylvestris</i>	Scotch Pine
183	<i>Pinus thunbergiana</i>	Japanese Black Pine
184	<i>Platanus x acerifolia</i>	London Planetree
185	<i>Poa pratensis</i> cv .	Kentucky Bluegrass
186	<i>Podocarpus macrophyllus</i>	Southern Yew
187	<i>Potentilla fruticosa</i> cv.	Shrubby Cinquefoil
188	<i>Prunus laurocerasus</i> cv.	Cherry Laurel
189	<i>Prunus serrulata</i>	Kwanzan Japanese Flowering Cherry

No.	Botanical Name	Common Name
	'Kwanzan'	
190	<i>Pyracantha coccinea</i> cv.	Firethorn
191	<i>Quercus alba</i>	White Oak
192	<i>Quercus palustris</i>	Pin Oak
193	<i>Quercus rubra</i>	Red Oak
194	<i>Rhododendron x catawbiense</i>	Catawba Hybrid Rhododendron
195	<i>Rhododendron Hybrid</i>	Exbury Hybrid Azalea
196	<i>Rosa spp.</i>	Landscape/Shrub Rose cv.
197	<i>Salvia nemorosa</i> cv.	Meadow Sage
198	<i>Sedum spp.</i>	Sedum
199	<i>Solenostemon scutellarioides</i>	Coleus
200	<i>Sorbus aucuparia</i>	European Mountain Ash
201	<i>Spiraea x bumalda</i>	Bumalda Spirea
202	<i>Syringa vulgaris</i> cv.	Common Lilac
203	<i>Tagetes spp. cv.</i>	Marigold
204	<i>Taxodium distichum</i>	Bald Cypress
205	<i>Taxus spp. and cv.</i>	Yew
206	<i>Thuja occidentalis</i> cv.	American Arborvitae
207	<i>Tilia cordata</i>	Littleleaf Linden
208	<i>Tsuga canadensis</i>	Canadian Hemlock
209	<i>Tulipa spp. cv.</i>	Tulip
210	<i>Verbena x hybrida</i> cv.	Garden Verbena
211	<i>Viburnum x burkwoodii</i>	Burkwood Viburnum
212	<i>Viburnum trilobum</i>	American Cranberrybush Viburnum
213	<i>Vinca minor</i> cv.	Periwinkle
214	<i>Viola x wittrockiana</i> cv.	Pansy
215	<i>Wisteria sinensis</i> cv.	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	Fireblight
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

Equipment and Supplies Identification

No.	Item Name
260	anvil-and-blade pruner
261	ball cart (B&B truck)
262	bark mulch
263	bow saw
264	broadcast (cyclone) spreader
265	bubbler head, irrigation
266	bulb planter
267	bunker rake
268	burlap
269	compressed air sprayer
270	core aerifier
271	chain saw
272	cut-off machine
273	drip emitter, irrigation
274	dry-lock wall block
275	edger (power or hand)
276	edging
277	erosion netting
278	fertilizer injector
279	fertilizer tablet
280	garden (spading) fork
281	garden (bow) rake
282	grafting band
283	grafting knife
284	granular fertilizer
285	gravity (drop) spreader
286	ground/pelleted limestone
287	hedge shears

No.	Item Name
288	hoe
289	hook-and-blade pruners
290	hose-end repair fitting
291	hose-end sprayer
292	hose-end washer
293	hose repair coupling
294	impact sprinkler
295	irrigation ring tool
296	landscape fabric
297	leaf rake
298	loppers
299	mattock
300	measuring wheel
301	mist nozzle (mist bed)
302	mower blade balancer
303	nursery container
304	oscillating sprinkler
305	peat moss
306	pick axe
307	planting/earth/soil auger
308	pole pruner
309	polyethylene pipe
310	pop-up irrigation head
311	post-hole digger
312	power blower
313	power hedge trimmer
314	pot-in-pot units
315	pump sprayer

No.	Item Name
316	propagation mat
317	pruning saw
318	quick coupler
319	quick coupler head adapter
320	reel mower
321	resin-coated fertilizer
322	rotary mower
323	rototiller
324	round point shovel
325	scoop shovel
326	shade fabric
327	sharpening stone
328	siphon proportioner
329	soaker hose
330	soil sampling tube
331	solenoid valve
332	spade
333	sphagnum moss
334	square point (flat) shovel
335	string trimmer
336	thatch rake
337	tree caliper
338	tree wrap
339	trowel
340	vertical mower
341	water breaker
342	wire tree basket

Potting Nursery Stock Practicum Scorecard

50 points

NAME		MEMBER NUMBER	
CHAPTER	STATE	TEAM NUMBER	
		Possible Points	Points Earned
Potting Process (34 points)			
Preparation of Plants <ul style="list-style-type: none"> Plants selected for quality and uniformity Inspects/prunes/grooms damaged parts Prunes excess root length Handles plants properly 		10	
Placement of Plants in Containers <ul style="list-style-type: none"> Plant centered and vertical Roots carefully and properly spread Plant at proper depth Plant roots covered 		10	
Media Filling and Settling <ul style="list-style-type: none"> Sufficient media added Media settled by bumping or hand firming Plant remains stable 		10	
Labeling of Completed Units <ul style="list-style-type: none"> Plant (variety) name and date Legible 		2	
Safety Practices Applied <ul style="list-style-type: none"> Proper cutting technique Tool closed when finished Minimal clutter/good organization in work area 		2	
Potting Productivity and Response to Questions (16 points)			
Number of Units Completed		5	
Quality of Units Completed <ul style="list-style-type: none"> Overall quality and uniformity of lot 		5	
Response to Questions		6	
TOTAL POINTS		50	

JUDGE'S NAME

JUDGE'S SIGNATURE

DATE

Propagating Nursery Stock Practicum Scorecard

50 points

NAME		MEMBER NUMBER	
CHAPTER	STATE	TEAM NUMBER	
		Possible Points	Points Earned
Propagation Process (34 points)			
Removal of Cuttings			
<ul style="list-style-type: none"> • Selects best quality uniform stock • Cuts at appropriate lengths • Makes clean cuts 		5	
Preparation of Cuttings			
<ul style="list-style-type: none"> • Leaves stripped/trimmed/groomed as needed • Proximity of cuts to nodes • Angled or wounded basal cut • Cutting/buds not damaged 		10	
Application of Proper Hormone			
<ul style="list-style-type: none"> • Sufficient applied and excess removed • Hormone kept clean 		7	
Placement of Cuttings in Media			
<ul style="list-style-type: none"> • Proper medium depth, as applicable • Media furrow cut and closed • Proper sticking depth • Efficient row and cutting spacing 		8	
Labeling of Completed Units			
<ul style="list-style-type: none"> • Plant (variety) name, date, treatment • Legible 		2	
Safety Practices Applied			
<ul style="list-style-type: none"> • Proper cutting technique • Tool closed when finished • Minimal clutter in work area 		2	
Propagation Productivity and Response to Questions (16 points)			
<ul style="list-style-type: none"> • Number of Units Completed 		5	
Quality of Units Completed			
<ul style="list-style-type: none"> • Uniform size and placement • Cutting stable in media 		5	
Judge's Questions			
<ul style="list-style-type: none"> • Response to questions 		6	
TOTAL POINTS		50	

JUDGE'S NAME

JUDGE'S SIGNATURE

DATE

Judges please award points as whole numbers only, no fractions

Team Activity Preparation 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	Strong evidence of skill is not present 1–0 points	Weight	Points Earned
Understanding of project goal	Clearly all members show understanding of the project goal.	Two to three members show understanding of the project goal.	One or less members show understanding of project goal.	X 2	
Member responsibilities outlined and defined	All members have activity responsibilities outlined and defined.	Two to three members have activity responsibilities outlined and defined,	One member or less has responsibilities outlined and defined.	X 2	
Participation in the team project goal	Clearly all team members completing task, sharing written and oral solutions.	Task primarily completed by two or three members, other members assist sparingly.	Task primarily completed by one team member, other members contribute only slightly.	X 2	
Agreement reached among team members on recommended solution to the goal	Clearly all members reach agreement on solution and are supportive.	Two to three members reach agreement on solution.	Two members or less reach agreement on solution.	X 2	
Plan is made on how to present the proposal to the client	Clearly defined plan developed: who does what during presentation.	Vaguely defined plan developed: who does what during presentation.	Little or no defined plan for presentation.	X 2	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE					

JUDGE'S NAME

JUDGE'S SIGNATURE

DATE

Team Activity Presentation 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	Strong evidence of skill is not present 1–0 points	Weight	Points Earned
Effective team interaction during presentation	Clearly evident that all team members are listening to presenter and add to presentation.	Listening occurs but no interaction with other team member ideas.	Not listening to each other, passive.	X 2	
Oral communication	Clearly evident that all team members are discussing the topic and are enthusiastic.	Communication occurs but lacks enthusiasm and two to three members dominates.	One member dominates the conversation.	X 2	
Demonstrated cooperation	Clearly all team members completing tasks, sharing written and oral solutions.	Tasks primarily completed by two or three members, other members assist occasionally.	Tasks primarily completed by one member, other members contributing only slightly.	X 2	
Technical value, correct information	Ideas are creative, technically correct and feasible.	Idea lacks creative thinking but is feasible and correct.	Glaring error in technical presentation or idea is not feasible.	X 2	
Overall results of presentation	All team members enthusiastic, convincing and positive about proposed solution.	Members make a knowledgeable but less than enthusiastic presentation of solution.	Presentation is not convincing, lacking in knowledge and salesmanship.	X 2	
TOTAL POINTS EARNED OUT OF 50 POSSIBLE					

JUDGE'S NAME

JUDGE'S SIGNATURE

DATE

Team Activity Preparation Rubric – Individuals

CHAPTER _____

STATE _____

TEAM NUMBER _____

INDICATOR	Very strong evidence of skill is present 5–4 points	Moderate evidence of skill is present 3–2 points	Strong evidence of skill is not present 1–0 points	Weight	Student's name: _____	Student's name: _____	Student's name: _____	Student's name: _____
Member effective with individual task.	Member effective in completing individual task, taking notes, making calculations, etc.	Member somewhat effective in completing individual task, making notes, making calculations, etc.	Member ineffective in completing their individual task. Does not prepare notes or do calculations.	X 2				
Member is supportive of others.	Member clearly supports each team member and makes suggestions to other team members.	Member does assigned task but does not offer suggestions.	Member really not involved or is argumentative.	X 2				
Member interacts in positive/constructive manner.	Member completes task, sharing written and oral solutions.	Member disagrees with proposed solution but does not present an alternative.	Member shows no interest in solution proposed.	X 2				
TOTAL POINTS EARNED OUT OF 30 POSSIBLE PER TEAM MEMBER								

JUDGE'S NAME _____

JUDGE'S SIGNATURE _____

DATE _____

Team Activity Presentation Rubric – Individuals

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	Student's name _____	Student's name _____	Student's name _____	Student's name _____
Voice, tone, eye contact	Speaks very articulately, with passion, with constantly effective eye contact (90-100% of the time).	Speaks articulately but occasionally speaks too fast or has long unnecessary hesitations, somewhat upbeat, with mostly effective eye contact (60-80 percent of the time).	Speaks too slow or too fast, lacks passion, occasionally effective eye contact (less than 50 percent of the time).				
Organization of Information	Content is very organized and easy to understand.	Content is somewhat organized and somewhat easy to understand.	Content is poorly organized and challenging to understand.				
Organization of Time	Team members share equal in presentation time.	Two members dominate the presentation time.	One member dominates the majority of time.				
Subject Knowledge	Possesses a strong knowledge-base and is able to effectively articulate information regarding situation.	Possesses a good knowledge-base and is able to, for the most part, articulate information regarding situation.	Possesses some knowledge-base but is unable to articulate information regarding situation.				
TOTAL POINTS EARNED OUT OF 20 POSSIBLE PER TEAM MEMBER							

JUDGE'S NAME _____

JUDGE'S SIGNATURE _____

DATE _____

Verbal Customer Assistance Rubric

50 points

NAME			MEMBER NUMBER		
CHAPTER		STATE		TEAM NUMBER	
INDICATOR	Very strong evidence of skill is present 5–4 points	Moderate evidence of skill is present 2–3 points	Weak evidence of skill is present 0–1 points	Points Possible	Points Earned
First impression	Individual identifies themselves with a good first impression.	Individual mostly identifies themselves with a good first impression.	Individual poorly identifies themselves with a good first impression.	5	
Personal rapport	Individual asks questions and utilizes information from answers in an attempt to build personal rapport.	Individual mostly asks questions and utilizes information from answers in an attempt to build personal rapport.	Individual poorly asks questions and utilizes information from answers in an attempt to build personal rapport.	5	
Clarifying questions	Individual asks questions to learn about the customer’s situation and to confirm preliminary customer information.	Individual asks mostly questions to learn about the customer’s situation and to confirm preliminary customer information.	Individual poorly asks questions to learn about the customer’s situation and to confirm preliminary customer information.	5	
Needs and wants	Individual confirmed and discovered customer needs and wants.	Individual mostly confirmed and discovered customer needs and wants.	Individual poorly confirmed and discovered customer needs and wants.	5	
Features and benefits	Individual applied features and benefits of their product to the customer’s needs/wants to their product feature.	Individual mostly applied features and benefits of their product to the customer’s needs/wants to their product features.	Individual poorly applied features and benefits of their product to the customer’s needs/wants to their product features.	5	
Matching needs and wants	Individual allows customer to participate in matching their wants/needs to the product features.	Individual mostly allows customer to participate in matching their wants/needs to the product features.	Individual poorly allows customer to participate in matching their wants/needs to the product features.	5	
Trial close	Individual uses appropriate technique to confirm customer understanding.	Individual mostly uses appropriate technique to confirm customer understanding.	Individual poorly uses appropriate technique to confirm customer understanding.	5	
Objections	Student listens and clarifies customers objections and discusses the features/benefits of the product information to address the customers objections.	Student mostly listens and clarifies customers objections and discusses the features/benefits of the product information to address the customers objections.	Student poorly listens and clarifies customers objections and discusses the features/benefits of the product information to address the customers objections.	5	
Close transaction	Student closes or attempts to close the transaction.	Student mostly closes or attempts to close the transaction.	Student poorly closes or attempts to close the transaction.	5	
Active listening	Individual actively listens to comments and answers from the customer.	Individual mostly listens to comments and answers from the customer.	Individual poorly listens to comments and answers from the customer.	5	
TOTAL SCORE					

JUDGE’S NAME

JUDGE’S SIGNATURE

DATE

Written Customer Assistance Practicum Scorecard

NAME	MEMBER NUMBER
CHAPTER	STATE
	TEAM NUMBER

	Possible Points	Points Earned
Customer Relations		
<ul style="list-style-type: none"> Does the communication create/maintain goodwill (is it free of negative words that create an unpleasant tinge)? Is the tone appropriate for the communications purpose? Does the communication emphasize reader (you) rather than writer (I)? Is the tone and reading level appropriate for reader? 	15	
Organization		
<ul style="list-style-type: none"> Is the content organized in logical, coherent order accepted business format? Is the communication properly divided into paragraphs with topic sentences? Is the communication divided into sentences which clearly convey key points? Does the communication use short conversational words? 	15	
Technical Information		
<ul style="list-style-type: none"> Is the technical information provided in letter correct? Is the information provided in simple, clear, concise manner? Does the letter relate directly to the inquiry? 	10	
Grammar/Punctuation		
<ul style="list-style-type: none"> Is the letter free of grammatical errors and misspelled words? 	10	
Total Score:	50	
Deductions (i.e., rules infractions, missing content)		()
TOTAL POINTS		

JUDGE'S NAME

JUDGE'S SIGNATURE

DATE

Nursery/Landscape Team Skills Challenge Scorecard

400 points

CHAPTER _____

STATE _____

TEAM NUMBER _____

Complete lines for number and type of events included. Record percentages as whole numbers only.

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 = _____ %

I. _____ Score = _____ points of _____ possible = _____ %

TEAM SCORE (AVERAGE) =

JUDGE'S NAME _____

JUDGE'S SIGNATURE _____

DATE _____