



# 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 and written 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

- 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”.
- 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 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 for both days of competition:
  - A clean clipboard
  - At least two No. 2 pencils
  - A ball-point or felt-tip pen
  - A 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 can 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 the coaches' letter.

### 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 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. The 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 the 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. Questions will be pulled from the last five years of National FFA Exams. The test bank will be uploaded to tnffa.org.

### *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 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.

**NOTE- ONLY ONE PHASE BETWEEN 5-6 WILL BE CONDUCTED AT THE STATE EVENT.**

#### *Phase 5: Verbal Customer Assistance (50 points per contestant)*

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

- 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 or treatments; dealing 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 and 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 but as applied to written communication. This interpersonal relations practicum is designed to evaluate participant knowledge of and ability in the following areas:

- 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 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 seven individual phases of the event. Team scores are the sum of all members scores plus the group portion of the team activity and team challenge. Possible points are as follows:

Phase	Member	Team
1A. Team activity – individual	50	200
1B. Team activity – group		100
3. General knowledge exam	150	600
4. Identification	150	600
5. Landscape estimating	100	400
6. Verbal customer assistance/written customer assistance	50	200
8. Nursery propagation/potting	50	200
<i>Individual Total</i>	550	
<b>TEAM TOTAL</b>		2,300

## **TIEBREAKERS**

### *Individuals*

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

- General knowledge exam.
- Identification.
- Landscape estimating.

### *Teams*

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

- Team activity total
- Team preparation and presentation scores.
- 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.

## NATIONAL FFA CORE CATALOG

- Nursery/Landscape CDE materials, [shop.FFA.org](http://shop.FFA.org)
- CDE Q&A's, [FFA.org](http://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](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/](http://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](http://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:

1. <http://www.stihlusa.com/information/>
2. <http://www.kubota.com>
3. <http://www.arysta-na.com>
4. <http://www.treefund.org>
5. <https://www.landscapeprofessionals.org/>

# Pests, Disorders and Beneficial Insects Identification

No.	Item Name
<b>Pests</b>	
217	Aphid
218	Bagworm
219	Borer
220	Leafhopper
221	Leaf Miner
222	Scale
223	Spider Mite
224	Snail/Slug
225	Whitefly
226	White Grub
<b>Diseases</b>	
227	Anthracnose
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
<b>Weeds</b>	
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
<b>Physiological Problems</b>	
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
<b>Beneficial Insects</b>	
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 tank pressurized
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
288	hoe
289	hook-and-blade pruners
290	hose-end repair fitting
291	hose-end sprayer
292	hose-end washer
293	hose repair coupling

No.	Item Name
294	impact sprinkler
295	landscape fabric
296	leaf rake
297	loppers
298	mattock
299	measuring wheel
300	mist nozzle (mist bed)
301	mower blade balancer
302	nursery container
303	oscillating sprinkler
304	peat moss
305	pick
306	planting/earth/soil auger
307	pole pruner
308	polyethylene pipe
309	pop-up irrigation head
310	post-hole digger
311	power blower
312	power hedge trimmer
313	pot-in-pot units
314	pump sprayer tank not pressurized
315	propagation mat
316	pruning saw
317	reel mower
318	resin-coated fertilizer
319	rotary mower
320	rototiller
321	round point shovel
322	scoop shovel
323	shade fabric
324	sharpening stone
325	siphon proportioner
326	soaker hose
327	soil sampling tube

No.	Item Name
328	solenoid valve
329	spade
330	sphagnum moss
331	square point (flat) shovel
332	string trimmer
333	thatch rake
334	tree caliper
335	tree wrap
336	trowel
337	vertical mower
338	water breaker
339	wire tree basket

## 2023 Nursery/Landscape Plant Identification

No.	Botanical Name	Common Name
101	<i>Abelia x grandiflora</i> cv.	Glossy Abelia
102	<i>Acer palmatum</i> cv.	Japanese Maple
103	<i>Acer rubrum</i> cv.	Red Maple
104	<i>Acer saccharum</i> cv.	Sugar Maple
105	<i>Aglaonema commutatum</i>	'Chinese Evergreen'
106	<i>Ajuga reptans</i> cv.	Carpet Bugle
107	<i>Amelanchier arborea</i>	Downy Serviceberry
108	<i>Aquilegia x hybrida</i> cv.	Columbine
109	<i>Astilbe hybrid</i> cv.	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>Brassaia actinophylla</i>	Schefflera, Octopus Tree
114	<i>Buddleia davidii</i> cv.	Butterfly Bush
115	<i>Buxus microphylla</i> cv.	Littleleaf Boxwood
116	<i>Camellia japonica</i> cv.	Common Camellia
117	<i>Cedrus atlantica</i> 'Glauca'	Blue Atlas Cedar
118	<i>Cercis canadensis</i>	Redbud
119	<i>Chaenomeles speciosa</i> cv.	Japanese (Flowering) Quince
120	<i>Clematis hybrid</i>	Clematis
121	<i>Cornus florida</i> cv.	Flowering Dogwood
122	<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
123	<i>Crataegus phaenopyrum</i>	Washington Hawthorn
124	<i>Cynodon dactylon</i> cv	Bermudagrass
125	<i>Dieffenbachia maculata</i> cv.	Spotted Dumb Cane
126	<i>Dracaena deremensis</i> 'Warneckii'	Striped Dracaena
127	<i>Dracaena fragens</i> 'Massangeana'	Corn Plant
128	<i>Echinacea purpurea</i>	Purple Coneflower
129	<i>Epipremnum</i> spp.	Pothos
130	<i>Euonymus alatus</i>	Winged Euonymus
131	<i>Euonymus fortunei</i> cv.	Wintercreeper
132	<i>Fagus sylvatica</i> cv.	European Beech
133	<i>Festuca</i> spp. and cv.	Fescue
134	<i>Ficus benjamina</i>	Benjamin Fig

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

# Potting Nursery Stock Practicum Scorecard

**50 POINTS**

Name \_\_\_\_\_ Member Number \_\_\_\_\_

Chapter \_\_\_\_\_ State \_\_\_\_\_ Team Number \_\_\_\_\_

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

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

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

# Team Activity Preparation Rubric - Team

**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 project goal	All members clearly 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	All team members clearly completed 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 of each other.	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	
<b>TOTAL POINTS EARNED OUT OF 50 POSSIBLE</b>					

Judge's Name \_\_\_\_\_

Judge's Signature \_\_\_\_\_

Date \_\_\_\_\_



# Team Activity Presentation Rubric - Team

## 50 POINTS

Chapter	State			Team Number	
Indicator	Very strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 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 dominate	One member dominates the conversation.	X 2	
Demonstrated cooperation	All team members clearly 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	
<b>TOTAL POINTS EARNED OUT OF 50 POSSIBLE</b>					

Judge's Name

Judge's Signature

Date

# Team Activity Preparation Rubric - Individuals

Chapter \_\_\_\_\_

State \_\_\_\_\_

Team Number \_\_\_\_\_

Indicator	Very strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 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 is 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				
<b>TOTAL POINTS EARNED OUT OF 30 POSSIBLE PER TEAM MEMBER</b>								

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 and 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% of the time)	Speaks too slow or too fast; lacks passion; occasionally effective eye contact (less than 50% 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 equally in presentation time.	Two members dominate the presentation time.	One member dominates the majority of the time.				
Subject knowledge	Possesses a strong knowledge-base and effectively articulates information regarding situation	Possesses a good knowledge-base and for the most part, articulates information regarding situation	Possesses some knowledge-base but is unable to articulate information regarding situation				
<b>TOTAL POINTS EARNED OUT OF 20 POSSIBLE PER TEAM MEMBER</b>							

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 3-2 points	Weak evidence of skill is present 1-0 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 mostly asks 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.	Individual mostly applied features and benefits of their product to the customer's needs/wants.	Individual poorly applied features and benefits of their product to the customer's needs/wants.	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	
<b>TOTAL POINTS EARNED OUT OF 50 POSSIBLE</b>					

Judge's Name	Judge's Signature	Date
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# Written Customer Assistance Practicum Scorecard

Name	Member Number
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	Points Possible	Points Earned
<b>Customer Relations</b>					
Creates Goodwill	Free of negative words.	No more than two negative words	More than two negative words	5	
Tone is appropriate for communication purposes	Tone is appropriate - positive	Tone is mostly appropriate - mostly positive.	Tone is inappropriate - negative.	5	
Emphasis is on the reader	Emphasizes the reader (you) rather than the writer (I).	Mostly emphasizes the reader (you) rather than the writer (I).	Emphasis is on the writer (I).	5	
Reading Level	Reading level is appropriate.	Reading level is mostly appropriate.	Reading level is not appropriate.	5	
<b>Organization</b>					
Letter Format	Date, addressee, greeting closing and signature included.	No more than 1 component missing.	Two or more components missing.	5	
Content Structure	Content is properly divided into paragraphs with a topical sentence.	Content is mostly divided into paragraphs with a topical sentence.	Paragraphs and sentences are disorganized.	5	
Sentence Structure	Sentences clearly convey key points.	Sentences mostly convey key points.	Sentences do not convey key points.	5	
<b>Technical Information</b>					
Recommendations	Technical Information is adequate.	Technical information is mostly accurate.	Technical information is inadequate.	5	
Ease of understanding the letter	Information is clear and concise.	Information is mostly clear and concise.	Information is not clear.	5	
<b>Grammar/Punctuation</b>					
Errors	No grammar, punctuation, or spelling errors.	No more than two grammar, punctuation, or spelling errors.	More than two grammar, punctuation, or spelling errors.	5	
<b>TOTAL POINTS EARNED OUT OF 50 POSSIBLE</b>					

Judge's Name	Judge's Signature	Date
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