

# **NURSERY/LANDSCAPE**

## **4 Member Team**

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### **IMPORTANT NOTE**

*Please thoroughly read the General CDE Rules Section at the beginning of this handbook for complete rules and procedures relevant to State FFA Career Development Events.*

#### **I. PURPOSE**

The purpose of the 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), as well as related production and landscaping products, equipment and services including design.

#### **II. OBJECTIVES**

- A. Nursery/Landscape Principles:** To apply nursery and landscape principles and practices as they impact residential, commercial, public and recreational applications.
- B. Plant Materials:** To demonstrate the ability to identify, select and utilize nursery and landscape plants, landscape materials, and turfgrasses commonly used in the United States.
- C. Plant Disorders:** To demonstrate the ability to identify unhealthy plant conditions due to pests, nutritional/physiological disorders and mechanical/chemical injury.
- D. Beneficial Insects:** To demonstrate the ability to identify beneficial insects found in the landscape and garden.
- E. Cultural Practices:** To demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, harvesting, sustainability, marketing and maintenance of landscape plants.
- F. Design and Construction:** To demonstrate knowledge of the principles and techniques of landscape design and construction.
- G. 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.
- H. Safety:** To demonstrate knowledge of safety practices in nursery and landscape operations.
- I. Interpersonal Relations:** To demonstrate skills in oral and written business communications.
- J. Marketing:** To demonstrate an understanding of marketing principles as well as proper sales and service skills.
- K. Records and Reports:** To demonstrate the ability to prepare accurate and legible records and reports and to interpret business documents.

### III. EVENT RULES

- A. Coaches may accompany participants to the event site but must then leave the area at the start of the event. At the conclusion of all event components, the superintendent will announce when participants and coaches may enter the competition area to review the materials and organization.
- B. 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.
- C. Any participant in possession of an electronic device in the event area is subject to disqualification.

### IV. EVENT FORMAT

#### A. Team Make-Up

Each school may enter only one team, consisting of 4 members and only those schools without a team may enter up to three individuals to compete for individual awards. Only those students who are competing will be allowed to participate in the event. The score for a team will consist of a total of all four members.

#### B. Equipment

- 1. No personal tools or supplies, except for pencils and pens, may be brought to the event unless specified in the event description.
- 2. The contest superintendent will supply clipboards, sample scan sheets for marking, identification lists, and official scan sheet to be turned in.

#### C. Event Schedule

- 1. **Each contestant shall complete the event in the time allotted:**
  - a. General Knowledge
  - b. Identification of Plants, Disorders, Equipment and Supplies (30 seconds at each station)
    - i. Plant Identification
    - ii. Plant Disorders Identification (ID of diseases, insects and related pests, physiological problems, weeds, and beneficial insects)
    - iii. Equipment and Supplies Identification
  - c. Practicum (Each participant will participate in both)

#### D. General Knowledge (150 points)

- 1. This portion of the event will consist of 50 questions addressing content from *Introduction to Horticulture--Third Edition*, published by the Oklahoma Department of Career and Technology Education.
- 2. Each question is worth 3 points.
- 3. Questions may be of the multiple-choice, true-false, and/or matching format(s).
- 4. Questions may or may not be written exactly as they are in the core. Although the exam will cover “general horticulture” knowledge, it will focus on nursery/landscape knowledge.

**E. Plant Identification (125 points)**

1. Each contestant will be required to identify 25 specimens (5 points each) from the Nursery/Landscape Identification list.
2. Contestants will receive an ID Card listing all possible specimens as shown on the attached list.
3. Contestants must place the ID number, representing the appropriate name, next to the number of the specimen to be identified.
4. Duplicate specimens may be used and may be represented by whole plants, stem cuttings, flowers, and/or a leaf or stem sample.

**F. Plant Pests/Disorders/Beneficial Insects Identification (45 points)**

1. Each contestant will be required to identify 15 specimens (3 points each) from the attached list.
2. Duplicate specimens may be used and may be represented by the actual organism (insect, fruiting bodies from pathogenic fungi, or weeds for example) and/or by symptoms on plant parts such as leaves, stems, or roots.
3. When a problem is presented with an affected plant, a “Disorder” label will be with the item to designate identification of the problem rather than the plant.

**G. Equipment and Supplies Identification (30 points)**

1. Each contestant will be required to identify 10 pieces of equipment (3 points each) from the attached list.

**H. Practicum (25 points each, 50 points total)**

1. All contestants will participate in all practicums. Each practicum activity will consist of a hands-on task and/or up to twenty-five questions about the practicum activity.

This year’s two practicum activities are as follows:

- a. Ornamental Garden Plan — A drawing will be provided. Students will be asked 25 questions (2 points each) regarding the plan. Questions may ask the students to calculate quantities and/or costs of materials needed to install and maintain the garden. Students should bring a calculator.
- b. Pruning Nursery Stock and Landscape Plants — One or more nursery or landscape plants will be displayed with points marked for possible pruning cuts. No plant will actually be pruned. Participants are to evaluate each labeled point and decide if the plant part should be pruned or not for improvement of the plant’s health, form, and overall quality. The answer choice then will be the combination of cuts that should be made. Some questions may be asked based on line drawings or photographs. Contestants may be outdoors for this portion of the event and should be prepared for inclement weather.

Be sure to check OCES Fact Sheet HLA-6409 for the latest pruning recommendations.

## V. SCORING

General Knowledge	150
Plant Identification	125
Plant Pest/Disorder/Beneficials Identification	45
Equipment and Supplies Identification	30
Practicums	50 (25 each)

### **Total Points**

**Individual 400**

**Team 1600**

## VI. TIEBREAKERS

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

1. Phase 2 – Identification Section
2. Phase 3 – Written Exam

## VII. REFERENCES

*Introduction to Horticulture--Third Edition*, published by the Oklahoma Department of Career and Technology Education

Be sure to check out OSU's Department of Horticulture and Landscape Architecture FFA CDE website at <https://agriculture.okstate.edu/departments-programs/hla/research-extension/youth/nursery-and-landscape-cde/> for additional FFA-CDE information, including sample exams and photos for identification.

Always consult OCES Fact Sheets, accessible from the web address above, for the most up-to- date information.

## VIII. SUPPLEMENTAL MATERIALS AND FORMS

Nursery/Landscape CDE Materials <http://shopffa.org/products/129/CDE/>

Oklahoma State Nursery/Landscape FFA CDE Plant ID Card

Oklahoma State Nursery/Landscape FFA CDE Pests, Disorders and Beneficial Insect Card

Oklahoma State Nursery/Landscape FFA CDE Equipment and Supplies Card Universal Form C #705C-1

National Contest Resources: <https://www.ffa.org/participate/cdes/nursery-landscape>

## NURSERY/LANDSCAPE PLANT IDENTIFICATION

1. *Abelia x grandiflora* / Glossy Abelia
2. *Acer palmatum* cv. / Japanese Maple
3. *Acer platanoides* cv. / Norway Maple
4. *Acer rubrum* cv. / Red Maple
5. *Acer saccharum* cv. / Sugar Maple
6. *Ajuga reptans* cv. / Carpet Bugle
7. *Amelanchier arborea* / Downy Serviceberry
8. *Antirrhinum majus* cv. / Snapdragon
9. *Aquilegia x hybrida* cv. / Columbine
10. *Astilbe x hybrida* cv. / Astilbe
11. *Begonia semperflorens-cultorum* / Wax Begonia
12. *Berberis x mentorensis* / Mentor Barberry
13. *Betula nigra* / River Birch
14. *Brassaia actinophylla* / Schefflera, Octopus Tree
15. *Buxus microphylla* cv. / Littleleaf Boxwood
16. *Camellia japonica* cv. / Common Camellia
17. *Cedrus atlantica* 'Glaucua' / Blue Atlas Cedar
18. *Cercis canadensis* / Redbud
19. *Chaenomeles speciosa* cv. / Japanese (Flowering) Quince
20. *Clematis* hybrids / Clematis
21. *Cornus florida* cv. / Flowering Dogwood
22. *Cotoneaster dammeri* / Bearberry Cotoneaster
23. *Cotoneaster divaricatus* / Spreading Cotoneaster
24. *Crataegus phaenopyrum* / Washington Hawthorn
25. *Cynodon dactylon* cv / Bermudagrass
26. *Echinacea purpurea* / Purple Coneflower
27. *Euonymus alatus* / Winged Euonymus
28. *Euonymus fortunei* cv. / Wintercreeper
29. *Festuca* spp. and cv. / Fescue
30. *Forsythia x intermedia* cv. / Border Forsythia
31. *Fraxinus americana* cv. / White Ash
32. *Gaillardia aristata* cv. / Common Blanketflower
33. *Gardenia jasminoides* 'Fortuniana' / Common Gardenia
34. *Ginkgo biloba* / Ginkgo, Maidenhair Tree
35. *Gleditsia triacanthos* f. *inermis* cv. / Thornless Honeylocust
36. *Hedera helix* cv. / English Ivy
37. *Hemerocallis* spp. and cv. / Day lily
38. *Hosta x hybrida* cv. / Plantain Lily
39. *Hydrangea quercifolia* / Oakleaf Hydrangea
40. *Hydrangea macrophylla* / Bigleaf Hydrangea
41. *Ilex cornuta* cv. / Chinese Holly
42. *Ilex crenata* cv. / Japanese Holly
43. *Ilex x meserveae* cv. / Meserve Holly
44. *Impatiens* hybrid cv. / Impatiens
45. *Iris x germanica florentina* cv. / Bearded Iris
46. *Juniperus chinensis* cv. / Chinese Juniper
47. *Juniperus horizontalis* cv. / Creeping Juniper
48. *Lagerstroemia indica* cv. / Crapemyrtle
49. *Leucanthemum x superbum* cv. / Shasta Daisy
50. *Liquidambar styraciflua* / Sweet Gum
51. *Liriodendron tulipifera* / Tuliptree
52. *Liriope* spp. cv. / Lily-Turf
53. *Lonicera japonica* 'Halliana' / Hall's Japanese Honeysuckle
54. *Magnolia grandiflora* cv. / Southern Magnolia
55. *Magnolia x soulangiana* cv. / Chinese (Saucer) Magnolia
56. *Mahonia aquifolium* cv. / Oregon Grapeholly
57. *Malus* spp. and cv. / Flowering Crabapple
58. *Nandina domestica* / Heavenly Bamboo
59. *Narcissus pseudonarcissus* cv. / Daffodil
60. *Nyssa sylvatica* / Sour (Black) Gum
61. *Pachysandra terminalis* / Japanese Spurge
62. *Paeonia* hybrid cv. / Peony
63. *Parthenocissus tricuspidata* / Boston Ivy
64. *Pelargonium x hortorum* cv. / Zonal Geranium
65. *Pennisetum ruppelia* / Fountain Grass
66. *Petunia x hybrida* cv. / Petunia
67. *Picea pungens* cv. / Colorado (Blue) Spruce
68. *Pieris japonica* / Lily-of-the-Valley Bush
69. *Pinus mugo* / Mugo Pine
70. *Pinus sylvestris* / Scotch Pine
71. *Pinus thunbergiana* / Japanese Black Pine
72. *Platanus x acerifolia* / London Planetree
73. *Plectranthus scutellarioides* / Coleus
74. *Poa pratensis* cv. / Kentucky Bluegrass
75. *Podocarpus macrophyllus* / Southern Yew
76. *Prunus laurocerasus* cv. / Cherry Laurel
77. *Pyracantha coccinea* cv. / Firethorn
78. *Quercus alba* / White Oak
79. *Quercus palustris* / Pin Oak
80. *Quercus rubra* / Red Oak
81. *Rhododendron catawbiense* / Catawba Hybrid Rhododendron
82. *Rhododendron* hybrid / Exbury Hybrid Azalea
83. *Rosa* spp. Class Hybrid Tea cv. / Hybrid Tea Rose
84. *Salvia nemorosa* cv. / Meadow Sage
85. *Sedum* spp. / Sedum
86. *Spiraea x bumalda* / Bumalda Spirea
87. *Syringa vulgaris* cv. / Common Lilac
88. *Tagetes* spp. cv. / Marigold
89. *Taxodium distichum* / Bald Cypress
90. *Taxus* spp. and cv. / Yew
91. *Thuja occidentalis* cv. / American Arborvitae
92. *Tilia cordata* / Littleleaf Linden
93. *Tulipa* spp. cv. / Tulip
94. *Verbena x hybrida* cv. / Garden Verbena
95. *Viburnum x burkwoodii* / Burkwood Viburnum
96. *Viburnum trilobum* / American Cranberrybush Viburnum
97. *Vinca minor* cv. / Periwinkle
98. *Viola x wittrockiana* cv. / Pansy
99. *Wisteria sinensis* cv. / Chinese Wisteria
100. *Yucca filamentosa* / Adam's Needle

**OKLAHOMA STATE NURSERY/LANDSCAPE FFA-CDE  
2023-2028 PESTS, DISORDERS AND BENEFICIAL INSECT IDENTIFICATION**

**Diseases**

- |                 |                      |
|-----------------|----------------------|
| 101 Anthracnose | 106 Cedar-Apple Rust |
| 102 Apple Scab  | 107 Crown Gall       |
| 103 Black Spot  | 108 Fireblight       |
| 104 Botrytis    | 109 Powdery Mildew   |
| 105 Canker      | 110 Root Rot         |

**Insects and Related Pests**

- |                |                 |
|----------------|-----------------|
| 111 Aphid      | 116 Scale       |
| 112 Bagworm    | 117 Snail/Slug  |
| 113 Borer      | 118 Spider Mite |
| 114 Leafhopper | 119 Whitefly    |
| 115 Leaf Miner | 120 White Grub  |

**Physiological Problems**

- |                                       |                           |
|---------------------------------------|---------------------------|
| 121 Frost/Freeze Injury               | 125 Pot-bound Roots       |
| 122 Iron Deficiency                   | 126 String Trimmer Injury |
| 123 Leaf Scorch (drought/winter burn) | 127 2,4-D Injury          |
| 124 Nitrogen Deficiency               |                           |

**Weeds**

- |                        |              |
|------------------------|--------------|
| 128 Annual Bluegrass   | 134 Henbit   |
| 129 Broadleaf Plantain | 135 Nutsedge |
| 130 Buckhorn Plantain  | 136 Oxalis   |
| 131 Chickweed          | 137 Purslane |
| 132 Crabgrass          | 138 Clovers  |
| 133 Dandelion          |              |

**Beneficial Insects**

- |                 |                    |
|-----------------|--------------------|
| 139 Lacewing    | 142 Praying Mantis |
| 140 Lady Beetle | 143 Spider         |
| 141 Paper Wasp  |                    |

**OKLAHOMA STATE NURSERY/LANDSCAPE FFA-CDE  
2023-2028 EQUIPMENT AND SUPPLIES IDENTIFICATION**

201	Anvil-and-blade pruner	228	Hedge shears	257	Pruning saw
202	Ball cart (B&B truck)	229	Hoe	258	Pump sprayer
203	Bark mulch	230	Hook-and-blade pruners	259	Quick coupler
204	Bow saw	231	Hose-end repair fitting	260	Quick coupler head adapter
205	Broadcast (cyclone) spreader	232	Hose-end sprayer	261	Reel mower
206	Bubbler head, irrigation	233	Hose-end washer	262	Resin-coated fertilizer
207	Bulb planter	234	Hose repair coupling	263	Rotary mower
208	Bunker rake	235	Impact sprinkler	264	Rototiller
209	Burlap	236	Irrigation ring tool	265	Round point shovel
210	Chain saw	237	Landscape fabric	266	Scoop shovel
211	Compressed air sprayer	238	Leaf rake	267	Shade fabric
212	Core aerifier	239	Loppers	268	Sharpening stone
213	Cut-off machine	240	Mattock	269	Siphon proportioner
214	Drip emitter, irrigation	241	Measuring wheel	270	Soaker hose
215	Dry-lock wall block	242	Mist nozzle (mist bed)	271	Soil sampling tube
216	Edger (power or hand)	243	Mower blade balancer	272	Solenoid valve
217	Edging	244	Nursery container	273	Spade
218	Erosion netting	245	Oscillating sprinkler	274	Sphagnum moss
219	Fertilizer injector	246	Peat moss	275	Square point (flat) shovel
220	Fertilizer tablet	247	Pick axe	276	String trimmer
221	Garden (spading) fork	248	Planting/earth/soil auger	277	Thatch rake
222	Garden (bow) rake	249	Pole pruner	278	Tree caliper
223	Grafting band	250	Polyethylene pipe	279	Tree wrap
224	Grafting knife	251	Pop-up irrigation head	280	Trowel
225	Granular fertilizer	252	Post-hole digger	281	Vertical mower
226	Gravity (drop) spreader	253	Pot-in-pot units	282	Water breaker
227	Ground/pelleted limestone	254	Power blower	283	Wire tree basket
		255	Power hedge trimmer		
		256	Propagation mat		