NURSERY AND LANDSCAPE CAREER DEVELOPMENT EVENT

Purpose:

To stimulate career interest, encourage proficiency development, and recognize excellence in students of nursery practices and landscaping through the agricultural education curriculum.

Objective:

- To demonstrate the ability to identify nursery and landscape plant materials and turf grasses commonly used in the United States.
- To demonstrate the ability to identify unhealthy plant conditions due to pests, nutritional or physiological disorders, and mechanical or chemical injury.
- To demonstrate knowledge of the principles and skills involved in propagation, growth requirements, growing techniques, harvesting, marketing and maintenance of nursery plants and landscape turf.
- To demonstrate knowledge of the principles and techniques of landscape design and construction.
- 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.
- To demonstrate knowledge of safety practices in nursery and landscape operations.
- To demonstrate skills in oral and written business communications.
- To demonstrate understanding of marketing principles and proper sales and service skills.
- To demonstrate the ability to prepare accurate and legible records and reports and to interpret business documents.

General Rules:

1. Participants may wear modified official FFA dress for this event (black slacks or jeans for females or black jeans for males and appropriate footwear, appropriate clothing for inclement weather).
2. Four persons will constitute an official team for the Nursery/Landscape Career Development Event. However, only three of the individual scores will be used in the team score tabulation. In addition, no alternates will be allowed in the Nursery/Landscape Event.
3. This State CDE will be conducted by the College of Southern Idaho in conjunction with State FFA Leadership Conference.
4. Materials participants will need to provide:
    a. -Pruning shears
    b. -Pruning knife
    c. -Gloves
    d. -Safety glasses
    e. -Engineers & Architects scale
    f. -Battery operated calculator (scientific calculators not allowed)

5. Entry fees to cover the cost of hosting the event will be assessed.

Format and scoring:

1. Identification of Plants, Pests, Disorders, Equipment & Supplies (150 points) - Participants will identify 50 items selected from the provided list covering the following categories:

   Plant Materials
   Plant Pests (Insects, Diseases,
   Weeds) Plant Disorders
   Equipment & Supplies

   Plants to identify will be presented as intact, live specimens. Pest and disorder and equipment & supply items may be presented as an intact specimen, photograph or preserved specimen. When a problem must be presented with an affected plant, a "Disorder" label will be with the item to designate the identification of the problem rather than the plant.

   When participants have identified the specimen, the appropriate number of the specimen as listed on attached form is to be written on a scorecard. Three points will be awarded for each specimen correctly identified. Each participant will be allowed 50 minutes to complete this phase of the contest. No specimens may be touched or handled in any way.

2. General Knowledge (150 points) - Thirty (30) objective-type multiple-choice questions will be selected from the areas listed below. This phase of the event will test the participant's knowledge and understanding of the basic principles relating to the following areas of horticulture (for example: questions for the plant materials area may deal with such features as anatomy of a flower or leaf, physiology of specific types of plants important to the horticultural industry, etc.) The contents of the exam will be extracted from the previous five (5) years of written exams from the National Nursery and Landscape Career Development Event.

   Areas for testing include:

   a. Plant materials
   b. Plant disorders
   c. Cultural practices
   d. Landscape design and construction
   e. Supplies and equipment
   f. Safety
   g. Equipment operation and maintenance
   h. Interpersonal relations (skills)
   i. Salesmanship
   j. Records and reports

Each participant will be allowed fifteen minutes to complete this phase. Each correct answer has a value of five points.

3. Landscape Drawing (150 points) - Participants will be furnished with a landscape drawing and scratch paper. The student will answer fifteen (15) objective questions about the landscape drawing, such as, determine the cost of fencing, cost of patio bricks, or the number of yards of sod required to cover a specific area. Each answer has a value of 10 points. Students should furnish both an architect and engineers scale and a battery-operated electronic calculator (if desired). Fifty minutes will be allowed for this practicum.

4. Practicum (150 points) - All participants will be required to complete the same three practicum's selected from those outlined below

Potting Nursery Stock (50 points) - Each participant will be provided with five liner stock plants of 5-7 inches in height. Participants will pot the plants in one-quart nursery containers using standard practices. Label, pencils, soil, containers, and hand pruners will be provided. Ten minutes will be allowed for completion of this practicum. An official will observe and score each participant during this practicum. Scoring criteria are presented on the "Potting Nursery Stock" scorecard.

Measuring Nursery Stock (50 points) - Each participant will be asked to measure five (5) nursery plants for market size (height, spread or caliper as appropriate) according to the American Standard for Nursery Stock for BR and B&B evergreen and deciduous trees and shrubs. A caliper and measuring rule will be provided. Plants presented in containers will be assumed as growing in the field, and a label will advise on whether it is to be dug BR or B&B. Ten minutes will be allowed for completion of this practicum.

Pruning Nursery Stock (50 points) - One or more nursery plants will be displayed with ten (10) points marked for possible pruning cuts. No plants 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. Five (5) positive cuts will be given point values equaling fifty (50). Five (5) negative cuts will be given zero (0) points. Participants will be given points based on the number of positive cuts selected. Ten minutes will be allowed for the completion of this practicum.

Propagating Nursery Stock (50 points) - Each participant will be furnished a stock plant, rooting flat and media, rooting hormone, and label and a marking pen. Participants are to prepare the designated softwood or hardwood cuttings and place them in the media with a single label. Ten minutes will be allowed for making and sticking up to twenty (20) cuttings. An official will observe and score each participant during this practicum. Scoring criteria are presented on the "Propagating Nursery Stock" score card.

Scoring the event:

1. Individual participant scores will be the sum of scores on the three parts of the event:

PHASE	POSSIBLE POINTS
Identification	150 points
Landscape Estimating	150 points
General Knowledge	150 points
Practicum's	150 points
TOTAL	600 points

2. Team scores will be the sum of the scores of the three team members. The total of points possible is1800.

Awards:

Awards are presented to teams as well as individuals based upon their rankings. The top 10 teams and individuals will be recognized. Individuals from 1st through 5th place will receive medals. Teams from 1st through 5th place will receive plaques.

Nursery/Landscape Plant Identification

Participant Name/Number_____

No.	Botanical Name	Common Name	No.	Botanical Name	Common Name
101	**Abies concolor**	White Fir	134	**Lonicera japonica 'Halliana'**	Hall's Japanese Honeysuckle
102	**Acer palmatum**	Japanese Maple	135	**Mahonia aquifolia cv.**	Oregon Grape
103	**Acer platanoides**	Norway Maple	136	**Malus spp. And cv.**	Flowering Crabapple
104	**Ajuga reptans cv.**	Carpet Bugle	137	**Narcissus pseudonarcissus cv.**	Daffodil
105	**Aquilegia x hybrida cv.**	Columbine	138	**Pachysandra terminalis**	Japanes Spurge
106	**Astilbe hybrid cv.**	Astilbe	139	**Paeonia hybrid cv.**	Peony
107	**Berberis x mentorensis**	Mentor Barberry	140	**Parthenocissus tricuspidata**	Boston Ivy
108	**Betula nigra**	River Birch	141	**Pennisetum ruppelia**	Fountain Grass
109	**Buxus microphylla cv.**	Littleaf Boxwood	142	**Picea abies**	Norway Spruce
110	**Cedrus atlantica 'Glauca'**	Blue Atlas Cedar	143	**Picea pungens cv.**	Colorado Blue Spruce
111	**Cercis canadensis**	Redbud	144	**Pieris japonica**	Lily-of-the-Valley-Bush
112	**Chaenomeles speciosa cv.**	Japanese (Flowering) Quince	145	**Pinus mugo**	Mugo Pine
113	**Chrysanthemum x superbum cv.**	Shasta Daisy	146	**Pinus sylvestris**	Scotch Pine
114	**Cornus florida cv.**	Flowering Dogwood	147	**Platanus x acerifolia**	London Planetree
115	**Cotoneaster dammeri**	Bearberry Cotoneaster	148	**Poa pratensis cv.**	Kentucky Bluegrass
116	**Cotoneaster divaricatus**	Spreading Cotoneaster	149	**Potentilla fruticosa cv.**	Shrubby Cinquefoil
117	**Crataegus phaenopyrum**	Washington Hawthorn	150	**Prunus serrulata**	Kwanzan' Jap. Flowering Cherry
118	**Echinacea purpurea**	Purple Coneflower	151	**Pyracantha coccinea cv.**	Firethorn
119	**Euonymus alatus**	Winged Euonymus	152	**Quercus palustris**	Pin Oak
120	**Euonymus fortunei cv.**	Wintercreeper	153	**Quercus rubra**	Red Oak
121	**Fagus sylvatica cv.**	European Beech	154	**Rosa spp. Class Hybrid Tea cv.**	Hybrid Tea Rose
122	**Festuca spp. And cv.**	Fescue	155	**Salvia nemorosa cv.**	Meadow Sage
123	**Forsythia x intermedia cv.**	Border Forsythia	156	**Sedum spurium cv.**	Sedum
124	**Fraxinus americana cv.**	White Ash	157	**Sorbus aucuparia**	European Mountain Ash
125	**Gallardia aristata cv.**	Common Blanketflower	158	**Spirea x bumalda**	Bumalda Spirea
126	**Ginkgo biloba**	Ginkgo, Maidenhair Tree	159	**Syringa vulgaris cv.**	Common Lilac
127	**Gleditsia triacanthos inermis cv.**	Thornless Honeylocust	160	**Taxus spp. And cv.**	Yew
128	**Hedera helix cv.**	English Ivy	161	**Thuja occidentalis cv.**	American Arborvitae
129	**Hemerocallis spp. and cv.**	Daylily	162	**Tilia cordata**	Littleleaf Linden
130	**Hosta x hybrida cv.**	Plantain Lily	163	**Tulipa spp. Cv.**	Tulip
131	**Ilex x meserveae**	Meserve Holly	164	**Viburnum trilolbum**	American Cranberry Bush
132	**Iris x germanica florentina cv.**	Bearded Iris	165	**Vinca minor cv.**	Periwinkle
133	**Juniperus chinensis cv.**	Chinese Juniper	166	**Wisteria sinensis cv.**	Chinese Wisteria
			167	**Yucca filamentosa**	Adam's Needle

Nursery/Landscape Plant Identification

Participant Name/Number_____

No.	Common Name	Botanical Name	No.	Common Name	Botanical Name
167	**Adam's Needle**	Yucca filamentosa	**148**	**Kentucky Bluegrass**	Poa pratensis cv.
161	**American Arborvitae**	Thuja occidentalis cv.	**150**	**Flowering Cherry**	**Prunus serrulata,** Kwanzan' Jap.
164	**American Cranberry Bush**	Viburnum trilolbum	**144**	**Lily-of-the-Valley-Bush**	Pieris japonica
106	**Astilbe**	Astilbe hybrid cv.	**109**	**Littleaf Boxwood**	Buxus microphylla cv.
115	**Bearberry Cotoneaster**	Cotoneaster dammeri	**162**	**Littleleaf Linden**	Tilia cordata
132	**Bearded Iris**	Iris x germanica florentina cv.	**147**	**London Planetree**	Platanus x acerifolia
110	**Blue Atlas Cedar**	Cedrus atlantica 'Glauca'	**155**	**Meadow Sage**	Salvia nemorosa cv.
123	**Border Forsythia**	Forsythia x intermedia cv.	**107**	**Mentor Barberry**	Berberis x mentorensis
140	**Boston Ivy**	Parthenocissus tricuspidata	**131**	**Meserve Holly**	Ilex x meserveae
158	**Bumalda Spirea**	Spirea x bumalda	**145**	**Mugo Pine**	Pinus mugo
104	**Carpet Bugle**	Ajuga reptans cv.	**103**	**Norway Maple**	Acer platanoides
133	**Chinese Juniper**	Juniperus chinensis cv.	**142**	**Norway Spruce**	Picea abies
166	**Chinese Wisteria**	Wisteria sinensis cv.	**135**	**Oregon Grape**	Mahonia aquifolia cv.
143	**Colorado Blue Spruce**	Picea pungens cv.	**139**	**Peony**	Paeonia hybrid cv.
105	**Columbine**	Aquilegia x hybrida cv.	**165**	**Periwinkle**	Vinca minor cv.
125	**Common Blanketflower**	Gallardia aristata cv.	**152**	**Pin Oak**	Quercus palustris
159	**Common Lilac**	Syringa vulgaris cv.	**130**	**Plantain Lily**	Hosta x hybrida cv.
137	**Daffodil**	Narcissus pseudonarcissus cv.	**118**	**Purple Coneflower**	Echinacea purpurea
129	**Daylily**	Hemerocallis spp. and cv.	**153**	**Red Oak**	Quercus rubra
128	**English Ivy**	Hedera helix cv.	**111**	**Redbud**	Cercis canadensis
121	**European Beech**	Fagus sylvatica cv.	**108**	**River Birch**	Betula nigra
157	**European Mountain Ash**	Sorbus aucuparia	**146**	**Scotch Pine**	Pinus sylvestris
122	**Fescue**	Festuca spp. And cv.	**156**	**Sedum**	Sedum spurium cv.
151	**Firethorn**	Pyracantha coccinea cv.	**113**	**Shasta Daisy**	Chrysanthemum x superbum cv.
136	**Flowering Crabapple**	Malus spp. And cv.	**149**	**Shrubby Cinquefoil**	Potentilla fruticosa cv.
114	**Flowering Dogwood**	Cornus florida cv.	**116**	**Spreading Cotoneaster**	Cotoneaster divaricatus
141	**Fountain Grass**	Pennisetum ruppelia	**127**	**Thornless Honeylocust**	Gleditsia triacanthos inermis cv.
126	**Ginkgo, Maidenhair Tree**	Ginkgo biloba	**163**	**Tulip**	Tulipa spp. Cv.
134	**Hall's Japanese Honeysuckle**	Lonicera japonica 'Halliana'	**117**	**Washington Hawthorn**	Crataegus phaenopyrum
154	**Hybrid Tea Rose**	Rosa spp. Class Hybrid Tea cv.	**124**	**White Ash**	Fraxinus americana cv.
138	**Japanese Spurge**	Pachysandra terminalis	**101**	**White Fir**	Abies concolor
112	**Japanese (Flowering) Quince**	Chaenomeles speciosa cv.	**119**	**Winged Euonymus**	Euonymus alatus
102	**Japanese Maple**	Acer palmatum	**120**	**Wintercreeper**	Euonymus fortunei cv.
			160	**Yew**	Taxus spp. And cv.

Nursery/Landscape Pests & Disorders Identification

No.	Item Name	No.	Item Name	No.	Item Name
Insects		181	Botrytis	195	Nutsedge
168	Aphid	182	Canker	196	Oxalis
169	Bagworm	183	Cedar-Apple Rust	197	Purslane
170	Borer	184	Crown Gall	198	White Clover
171	Leafhopper	185	Fireblight	***Physiological Problems***	
172	Leaf Miner	186	Powdery Mildew	199	Frost/Freeze Injury
173	Scale	187	Root Rot	200	Iron Deficiency
174	Spider Mite	***Weeds***		201	Leaf Scorch(drought/winterburn)
175	Snail/Slug	188	Annual Bluegrass	202	Nitrogen Deficiency
176	Whitefly	189	Broadleaf Plantain	203	Pot-bound Roots
177	White Grub	190	Buckhorn Plantain	204	String Trimmer Injury
Diseases		191	Chickweed	205	2,4-D Injury
178	Anthracnose	192	Crabgrass		
179	Apple Scab	193	Dandelion		
180	Black Spot	194	Henbit		

Nursery/Landscape Equipment & Supplies Identification

No.	Item Name	No.	Item Name	No.	Item Name
206	Anvil-and-blade pruner	226	edger (power or hand)	247	hose-end sprayer
207	architect's scale	227	Edging	248	hose-end washer
208	ball cart (B&B truck)	228	engineer's scale	249	hose repair coupling
209	bark mulch	229	erosion netting	250	impulse sprinklers
210	bark medium	230	fertilizer tablet	251	landscape fabric
211	bow saw	231	galvanized pipe	252	leaf rake
212	Brick paver	232	garden (spading) fork	253	loppers
213	broadcast spreader	234	garden (bow) rake	254	mattock
214	bubbler head, irrigation	235	gas mask	255	measuring wheel
215	bulb planter	236	grafting band	256	mist nozzle (mist bed)
216	burlap	237	grafting tool	257	mower blade balancer
217	chaps	238	granular fertilizer	258	nursery container
218	compressed air sprayer	239	gravity (drop) spreader	259	oscillating sprinkler
219	core aerifier	240	grass shears	260	peat moss
220	Chain saw	241	ground limestone	261	pick axe
221	cut-off machine	242	hearing protection	262	soil auger
222	drip emitter, irrigation	243	hedge shears	263	planting bar
223	dry-lock wall block	244	Hoe	264	pole pruner
224	duster	245	hook-and-blade pruners	265	polyethylene film
225	dust mask	246	hose-end repair fitting	266	polyethylene pipe

No.	Item Name	No.	Item Name	No.	Item Name
267	pop-up irrigation head	280	round point shovel	293	spray suit
268	post-hole digger	281	safety goggles	294	square point shovel
269	power blower	282	Sand	295	string trimmer
270	power hedge trimmer	283	scoop shovel	296	tape measure
271	pot-in-pot units	284	shade fabric	297	topsoil
272	propagation mat	285	sharpening stone	298	tree caliper
273	pruning saw	286	siphon proportioner	299	tree wrap
274	PVC pipe	287	soaker hose	300	trowel
275	reel mower	288	soil sampling tube	301	T-square
276	Resin-coated fertilizer	289	solenoid valve	302	vermiculite
277	respirator	290	Spade	303	vertical mower
278	rotary mower	291	spark plug gap gauge	304	water breaker
279	rototiller	292	sphagnum moss	305	wire tree basket

NURSERY AND LANDSCAPE
CAREER DEVELOPMENT EVENT SCORECARDS

NURSERY/LANDSCAPE IDENTIFICATION SCORECARD

PARTICIPANT NAME _____ **PARTICIPANT NUMBER** _____

Directions:
Identify plant specimens, insect pests, diseases, weed pests and equipment and supplies by **writing the correct sample number in the appropriate same number below.**

1	_____	26	_____
2	_____	27	_____
3	_____	28	_____
4	_____	29	_____
5	_____	30	_____
6	_____	31	_____
7	_____	32	_____
8	_____	33	_____
9	_____	34	_____
10	_____	35	_____
11	_____	36	_____
12	_____	37	_____
13	_____	38	_____
14	_____	39	_____
15	_____	40	_____
16	_____	41	_____
17	_____	42	_____
18	_____	43	_____
19	_____	44	_____
20	_____	45	_____
21	_____	46	_____
22	_____	47	_____
23	_____	48	_____
24	_____	49	_____
25	_____	50	_____

SCORE: _____

SCORING DIRECTIONS:

Each plant, insect pest, disease, weeds pests and equipment and supplies identification is worth 3 points. Deduct total incorrect from 150 points possible and record score at the bottom of the card.

NURSERY/LANDSCAPE EVENT
POTTING OF NURSERY STOCK PRACTICUM
SCORECARD

Participant Number

Participant Name

Chapter_____

Points		Possible Points	Participant
A.	**Potting Process (35 points)**		
	1. PREPARATION OF PLANTS		
	-Plants selected for quality and uniformity	**(10)**	_____
	-Inspects/prunes/grooms damaged parts		
	-Prunes excess root length		
	-Handles plants properly, applies Vit.B		
	2. PLACEMENT OF PLANTS IN CONTAINERS		
	-Plant centered and vertical	**(10)**	_____
	-Roots carefully and properly spread		
	-Plant at proper depth		
	-Plant roots covered		
	3. MEDIA FILLING AND SETTLING		
	-Sufficient media added	**(10)**	_____
	-Media settled by bumping		
	-Plant remains stable		
	4. LABELING OF COMPLETED UNITS		
	-Plant (variety) name and date	**(2)**	_____
	-Legible		
	5. SAFETY PRACTICES APPLIED		
	—Proper cutting technique	**(3)**	_____
	-Tool closed when finished		
	-Minimal clutter/good organization in work area		
B.	**Potting Product (15points)**		
	1. NUMBER OF UNITS COMPLETED	**(10)**	_____
	2. QUALITY OF UNITS COMPLETED	**(5)**	_____
	-Overall quality and uniformity of lot		
	TOTAL POINTS	**(50)**	_____

NURSERY/LANDSCAPE EVENT
MEASURING NURSERY STOCK
SCORECARD

Participant Number

Participant Name

Chapter _____

		Possible Points	Participant Points
A.	**Measure at correct spot**	**(5)**	_____
	Correct measurement	**(5)**	_____
B.	**Measure at correct spot**	**(5)**	_____
	Correct measurement	**(5)**	_____
C.	**Measure at correct spot**	**(5)**	_____
	Correct measurement	**(5)**	_____
D.	**Measure at correct spot**	**(5)**	_____
	Correct measurement	**(5)**	_____
E.	**Measure at correct spot**	**(5)**	_____
	Correct measurement	**(5)**	_____
	TOTAL POINTS	**(50)**	_____

NURSERY/LANDSCAPE EVENT
PROPAGATING NURSERY STOCK SCORECARD

Participant Number _____
Participant Name
Chapter _____

		Possible Points	Participant Points
A.	**PROPAGATION PROCESS (35 POINTS)**		
1.	**REMOVAL OF CUTTINGS** -Selects best quality, uniform stock -Cuts at appropriate lengths -Makes clean cuts	(5)	_____
2.	**PREPARATION OF CUTTINGS** -Leaves stripped/trimmed/groomed as needed -Proximity of cuts to nodes -Angled or wounded basal cut -Cuttings/buds not damaged	(10)	_____
3.	**APPLICATION OF PROPER HORMONE** -Sufficient applied and excess removed -Hormone kept clean	(7)	_____
4.	**PLACEMENT OF CUTTINGS IN MEDIA** -Proper medium depth, as applicable -Media furrow cut and closed -Proper sticking depth -Efficient row and cutting spacing	(8)	_____
5.	**LABELING OF COMPLETED UNITS** -Plant (variety0 name, date treatment -Legible	(2)	_____
6.	**SAFETY PRACTICES APPLIED** -Proper cutting technique -Tool closed when finished -Minimal clutter in work area	(3)	_____
B.	**POTTING PRODUCTIVITY (15 POINTS)**		
1.	**NUMBER OF UNITS COMPLETED**	(10)	_____
2.	**QUALITY OF UNITS COMPLETED** -Uniform size and placement -Cuttings stable in media	(5)	_____
	TOTAL POINTS	(50)	_____

NURSERY/LANDSCAPE EVENT
PRUNING NURSERY STOCK SCORECARD

Participant Number_____

Participant Name_____

Chapter_____

Pruning Cuts (50 Points)

Select, by placing an "X" next to the number, the five (5) pruning cuts you feel would most improve the plant's health, form and overall quality.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____