



# Floriculture



## Purpose

*The Tennessee FFA Floriculture Career Development Event is designed to create an interest in career preparation for all current and future aspects of the floriculture industry through leadership development and hands on technical skill development using industry standards that are delivered through the agricultural education curriculum.*

Floriculture is a discipline of horticulture concerned with the cultivation of flowering and ornamental plants for gardens and the floral industry.

The floriculture industry encompasses the following areas:

- Greenhouse and field production and management.
- Garden center and floral shop management.
- Floral design and management.

## Objectives

- Identify plants, plant materials, supplies and equipment utilized in the floriculture industry.
- Demonstrate an understanding of the biological and scientific principles of plant growth and development. Develop the skills underlying propagation, variety development, growth requirements, growing techniques, harvesting, marketing and maintenance of established floriculture plants.
- Identify and recommend solutions for plant disorders.
- Demonstrate the use of elements and principles of design and develop related skills.
- Evaluate marketable floral products for quality and cultural perfection for use in the retail floral industry.
- Identify, select, operate and maintain appropriate supplies and equipment for floriculture production, design and marketing.
- Demonstrate the use of safety procedures and practices in floriculture operations.
- Understand the operation, management and maintenance of facilities for floriculture operations.
- Demonstrate interpersonal skills necessary for successful employment in the floriculture industry.
- Demonstrate proper sales and customer service skills.
- Demonstrate general business practices appropriate to the floriculture industry.
- Effectively work together as a team.

## Event Rules

- Each team will be comprised of four members.
- All four scores will be used to determine the total team score.
- Official FFA Dress is not required for this event.
- Under no circumstances will any participant be allowed to touch or handle plant material during

the event except when instructed by the event staff.

- Any communication between participants during the event will be sufficient cause to eliminate the team from the event. The exception to this is the team activity.
- Any participant caught cheating during the event will be expelled from the event.

- The event superintendent will assign the participants to group leaders who will escort them to various event staging sites. Participants must know their participant number and stay in their assigned group at all times or until told to change leaders by the event superintendent.
- Any assistance given to a participant from any source during the event, other than a floriculture official, will be sufficient cause to eliminate the team from the event.
- All participants will be given an identification number by which they will be designated throughout the event.
- Various computer applications may be utilized throughout the floriculture event.
- Any participant in possession of an electronic and/or communication device in the event area is subject to disqualification.

## Event Format

### MATERIALS STUDENTS NEED TO PROVIDE:

- Clean clipboard, free of notes.
- Two sharpened No. 2 pencils.
- Floral cutters/clippers.
- Ribbon shears.
- Wire cutters.
- Calculator — Should be battery operated, non-programmable and non-scientific (basic five function only). No other calculators can be used during the event.

### TEAM ACTIVITY (800 POINTS)

Each team will perform an assignment routinely performed in some phase of the floriculture industry that requires teamwork. These tasks will be described in situational terms for presentation to each team. Forty-five minutes will be allowed for completing the activity. If a presentation to the judges is required, the presentation portion of the event will take place after the 45 minute time period has ended. Presentation times may vary depending on the assigned task but will not exceed 10 minutes. There will be an additional time allowed after judging is complete for team clean up. All materials, with the exception of floral tools, needed to complete the assignment will be provided. The type of activity and information about the specific tasks will be announced at the beginning of the practicum by the event assistant in charge.

The type of assignments that may be used in this phase of the event include, but are not limited to, the following:

- Prepare floral products for an event.
- Prepare and pack floral products for shipping and updating inventory.
- Create a floral product display.
- Create a greenhouse production and task schedule to meet the needs of a given customer.
- Prepare and display plant material found in a garden center.

Scoring criteria for the team preparation and presentation are on the Team Activity Rubric, which will be recorded by a judge.

### INDIVIDUAL ACTIVITIES

Identification of plant materials and equipment (200 points)

Fifty specimens from the floriculture plant and equipment identification list will be displayed for participants to identify by technical and common names. A number will designate each specimen. Four points will be awarded for each specimen that is correctly identified. Each participant will be allowed 25 minutes to complete this phase of the event.

### *General Knowledge Examination (200 points)*

Participants will answer 50 multiple choice questions to test all areas of the floriculture industry as reflected in the event objectives including flowers and material from the wholesaler and how they are handled, stored, and used in the flower shop; knowledge of floral design (arrangement) and marketing of floral products from the floral shop as well as participants' knowledge and understanding of basic biological and scientific principles of producing and marketing flowers, plants and foliage. Each participant will be allowed 50 minutes to complete the exam. Each answer has a value of four points. The exam will be comprised of questions from the last five years of National FFA Floriculture exams.

### *Annual Practicums (200 points)*

Each participant will complete two annual practicums:

Floral arrangement  
Growing procedures

### *Floral Arrangement (100 points)*

Make up to a \$55 retail priced floral arrangement in compliance with the scenario provided. (The total cost will include tax as well as retail mark up for fresh and hard goods and be within fifty cents either way of the total amount.) The event superintendent will announce the type of arrangement during the team orientation meeting. Using the materials provided, participants will be allowed 20 minutes to complete their arrangements and itemized bills. The event assistant at the beginning of the practicum will provide participants with the retail price of the flowers and foliage that they will use in their arrangements. The participant will determine the total arrangement cost using the pricing form provided plus 20% labor on their design. Retail cost of flowers and foliage given to the participant will be determined after polling florists to determine their current retail prices on the flowers and foliage used in the event. Scoring criteria are presented on the Floral Arrangement Practicum scorecard, which will be recorded by a judge.

## **EXPLANATION OF FLORAL ARRANGEMENT TERMS**

**Design:** Category interpretation: design follows objective/scenario given

**Balance:** Physical and visual

**Creativity:** Artistic inventiveness

**Depth:** Placement of materials at different levels throughout the arrangement

**Focal Emphasis:** Design has one area of design that attracts the eye to it

**Line:** Movement

**Mechanics:** Professional techniques and application

**Scale:** Proportion

**Unity:** Cohesiveness of design

**Color:** harmonious use of color

### *Growing Procedures (100 points)*

One of the three activities listed below will be demonstrated on an annual basis. Ten minutes will be allowed for this section including questions from the judges. Seven (7) minutes to complete the assigned task, 1 minute for judges' questions, and 2 minutes for judges scoring.

#### **POTTING OF YOUNG PLANTS (PLUGS OR LINERS)**

Participants will be asked to plant young plants in the pots provided. Each participant will be given a group of young plants from which to select their transplants from; an appropriate pot or pots; potting medium; and ID stake and a marking pencil. Scoring criteria are presented on the Potting of Young Plants Practicum Rubric, which will be recorded by a judge.

#### **ASEXUAL PROPAGATION OF PLANTS**

Each participant will be provided the parent plant materials and all other materials needed to propagate plants asexually. Using the available materials, participants will take cuttings from the plant before them and stick them in the correct media, best for rooting. Participants should sanitize all equipment and use it appropriately in a safe manner. Scoring criteria are presented on the Asexual Plant Propagation Rubric, which will be recorded by a judge.

#### **PINCHING PLANTS**

A plant will be placed before each participant. Participants will be judged on the procedures they follow in pinching the plant in compliance with the scenario provided. Scoring criteria are presented on the Pinching Plants Rubric, which will be recorded by a judge.

### *Rotational Practicums (75 Points)*

In addition to the two annual practicums, one practicum will be selected from the list below for each year. The three to be used will be identified by the event superintendent.

#### ❖ **MAKE A MIXED PLANTER COMBINATION (75 POINTS)**

Each participant will make up to a \$35 retail priced mixed combination planter. All plant materials, growing media and containers will be provided. Twenty (20) minutes will be allowed for each participant to make their mixed combination planter and complete the itemized listing of costs. At the beginning of the practicum, the participant will be provided with the retail price of plants and other materials to be used in their mixed combination planter. The markup is built into the retail price. Selection of materials should be combined to create a floral display according to the acceptable retail practices, using appropriate elements and principles of design within the floral industry. Scoring criteria are presented on the Making a Mixed Combination Planter Rubric, which will be recorded by a judge.

#### ❖ **MAKE AND PACKAGE A CORSAGE (75 POINTS)**

Each participant will make and package a \$25 retail priced corsage including 20% labor. The type of corsage and information about the corsage will be provided to the participants through a given scenario at the beginning of the practicum by the event assistant in charge. All plant and non-plant materials needed to construct and package the corsage will be provided. The selection of materials should be combined to create a floral display according to the acceptable retail purposes, using appropriate elements and principles of design. Each participant will be allowed 20 minutes to complete the construction of the corsage and complete an itemized listing of costs for the corsage constructed. Scoring criteria are presented on the Making and Packing a Corsage Rubric, which will be recorded by a judge.

#### ❖ **IDENTIFYING AND CONTROLLING PLANT DISORDERS (75 POINTS)**

Pest and disorder items may be presented as an intact specimen, photograph or preserved specimen (herbarium sheet, insect mount, etc.). Each specimen will be designated by a station number. The participant must identify the item and its classification (nutritional/environmental,

insect/pest or disease). The participant must then determine the damage location as well as chemical and culture controls for the disorder. Each participant will identify 15 specimens total for this event.

No specimens or items may be touched or handled in any way. Fifteen (15) minutes will be allowed for this event. Refer to the Disorder Practicum Scorecard for additional details.

The plant disorders will come from the following list of disorders.

#### **NUTRITIONAL AND ENVIRONMENTAL DISORDERS**

- Cold temperature (freeze)
- Cold water damage
- Ethylene damage
- Insufficient water damage
- Iron deficiency
- Nitrogen deficiency
- Phosphorus deficiency

#### **DISEASES**

- Botrytis – Gray mold
- Damping-off
- Downy mildew
- Leaf spot (Black)
- Powdery mildew
- Root rot
- Rust
- Stem rot
- Tospovirus (INSV and TSWV)

#### **INSECTS AND PESTS**

- Aphids
- Fungus gnats
- Leaf miner
- Leafhopper
- Mealybugs
- Scale
- Shore flies
- Snails/Slugs
- Spider mites
- Thrips
- Whiteflies

## Scoring

Phase	Individual Points	Team Points
Plant and Equipment Identification	200	800
General knowledge	200	800
Annual practicums - 100 points each * Floral arrangement * Growing procedures	200	800
Rotational practicums – 1 selected * Selling * Make a Mixed Planter Combination * Make and Package a Corsage * Identifying/Controlling Plant Disorders	75	300
Team activity	0	800
<b>TOTAL</b>	675	3,500

### TIEBREAKERS

If ties occur, the following events will be used in the listed order to determine award recipients:

#### Individual

1. Plant and equipment identification
2. Floral arrangement practicum
3. Growing procedures
4. Written exam

#### Team

1. Team activity
2. Plant and equipment identification
3. Written exam

## References

*This list of references is not intended to be all-inclusive.*

- Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.
- National FFA— Past CDE Q&A's, <https://www.ffa.org/resources/cde/questions-and-answers>
- Principal of Floral Design, Pat Diehl Scafe, James M. DelPrince – Goodheart Wilcox Publisher. [www.g-w.com](http://www.g-w.com)
- The AIFD Guide to Floral Design: Terms, Techniques, and Traditions – The American Institute of Floral Design.
- Introduction to Horticulture Science and Technology. 5th edition, 2015. Schroeder, Seagle Felton, Ruter, Interstate Publishers, Inc.
- Introductory Horticulture. Carroll Shry, Edward Reiley. Eighth Edition.
- Greenhouse Operation and Management. Paul V. Nelson. Seventh Edition. (Specific reference for the disorders rotational practicum)
- Ball Publishing: Ball Redbook, Volume 1&2, 18th Edition.



# Floriculture Plant Identification List

101	<i>Aechmea fasciata cv.</i>	Silver Vase Bromeliad	149	<i>Fragaria x ananassa cv.</i>	Strawberry Plant
102	<i>Ageratum houstonianum</i>	Ageratum	150	<i>Freesia x hybrida</i>	Freesia
103	<i>Alstroemeria hybrid cv.</i>	Peruvian Lily	151	<i>Gardenia jasminoides</i>	Gardenia
104	<i>Anemone coronaria</i>	Anemone	152	<i>Gerbera jamesonii</i>	Gerbera Daisy
105	<i>Anethum graveolens cv.</i>	Dill	153	<i>Gladiolus x hortulanus cv.</i>	Garden Gladiolus
106	<i>Angelonia hybrid cv.</i>	Angelonia	154	<i>Gomphrena hybrid cv.</i>	Globe Amaranths
107	<i>Anthurium x andraeanum cv.</i>	Flamingo Plant	155	<i>Gypsophila elegans cv.</i>	Baby's Breath
108	<i>Antirrhinum majus cv.</i>	Snapdragon	156	<i>Hedera helix cv.</i>	English Ivy
109	<i>Aphelandra squarrosa cv.</i>	Zebra Plant	157	<i>Helianthus annuus</i>	Sunflower
110	<i>Araucaria heterophylla</i>	Norfolk Island Pine	158	<i>Hemerocallis cv.</i>	Daylily
111	<i>Asparagus densiflorus</i>	Sprengeri Fern	159	<i>Hippeastrum hybrid cv.</i>	Amaryllis
112	<i>Aster pringlei</i>	Monte Cassino Aster	160	<i>Hosta cv.</i>	Hosta
113	<i>Astilbe hybrid cv.</i>	Astilbe	161	<i>Hoya carnosa</i>	Wax Plant
114	<i>Begonia x semperflorens – cultorum</i>	Wax Begonia	162	<i>Hyacinthus orientalis cv.</i>	Hyacinth
115	<i>Begonia x tuberhybrida cv.</i>	Tuberous Begonia	163	<i>Hydrangea macrophylla</i>	Big Leaf Hydrangea
116	<i>Caladium x hortulanum cv.</i>	Caladium	164	<i>Impatiens hybrid cv.</i>	Impatiens
117	<i>Calibrachoa hybrid cv.</i>	Million Bells	165	<i>Impomoea batatas cv.</i>	Ornamental Sweet Potato
118	<i>Callistephus chinensis cv.</i>	China Aster	166	<i>Iris x xiphium cv.</i>	Dutch Iris
119	<i>Campanula hybrid cv.</i>	Campanula	167	<i>Senecio cineraria</i>	Dusty Miller
120	<i>Canna x generalis cv.</i>	Garden Canna	168	<i>Justica brandegeana</i>	Shrimp Plant
121	<i>Capsicum annuum</i>	Ornamental Pepper Plant	169	<i>Kalanchoe x blossfeldiana cv.</i>	Kalanchoe
122	<i>Catharanthus roseus</i>	Vinca	170	<i>Leucanthemum x superbum</i>	Shasta Daisy
123	<i>Celosia argentea cv.</i>	Cockscomb	171	<i>Leucospermum hybrid cv.</i>	Pin Cushion Protea
124	<i>Chamaedorea elegans</i>	Parlor Palm	172	<i>Liatris spicata</i>	Liatris
125	<i>Chamelaucium uncinatum</i>	Waxflower	173	<i>Lilium hybrid cv.</i>	Asiatic or Oriental Lily
126	<i>Cholorophytum comosum cv.</i>	Spider Plant	174	<i>Limonium sinuatum</i>	Statice
127	<i>Chrysanthemum x morifolium</i>	Florist's Chrysanthemum	175	<i>Lobularia maritima</i>	Alyssum
128	<i>Clematis hybrid cv.</i>	Clematis	176	<i>Maranta leuconeura</i>	Prayer Plant
129	<i>Codiaeum variegatum pictum</i>	Croton	177	<i>Matthiola incana cv.</i>	Stock
130	<i>Crassula argentea</i>	Jade Plant	178	<i>Monstera deliciosa</i>	Split Leaf Philodendron
131	<i>Cycas revoluta cv.</i>	Sago Palm	179	<i>Narcissus hybrid cv.</i>	Daffodil or Narcissus
132	<i>Cyclamen x persicum cv.</i>	Florist's Cyclamen	180	<i>Nephrolepis exaltata cv.</i>	Boston Fern
133	<i>Cymbidium cv.</i>	Cymbidium Orchid	181	<i>Ocimum basilicum cv.</i>	Basil
134	<i>Cymbopogon cv.</i>	Lemongrass (herb)	182	<i>Opuntia cv.</i>	Cactus
135	<i>Dahlia hybrid cv.</i>	Dahlia	183	<i>Paeonia cv.</i>	Peony
136	<i>Delphinium consolida cv.</i>	Larkspur	184	<i>Paphiopedilum hybrid cv.</i>	Ladyslipper Orchid
137	<i>Dendrobium cv.</i>	Dendrobium Orchid	185	<i>Pelargonium x hortorum cv.</i>	Zonal Geranium
138	<i>Dianthus caryophyllus cv.</i>	Carnation	186	<i>Pelargonium peltatum cv.</i>	Ivy Geranium
139	<i>Dracaena cincta</i>	Red Edge Dracaena	187	<i>Pentas hybrid cv.</i>	Pentas
140	<i>Echinocactus cv.</i>	Barrel Cactus	188	<i>Petroselinum crispum cv.</i>	Parsley
141	<i>Epipremnum aureum cv.</i>	Golden Pothos	189	<i>Petunia x hybrida cv.</i>	Petunia
142	<i>Erica carnea cv.</i>	Spring Heather	190	<i>Phalaenopsis cv.</i>	Moth Orchid
143	<i>Eucalyptus polyanthemos</i>	Silver Dollar Eucalyptus	191	<i>Philodendron scandens oxycardium</i>	Heartleaf Philodendron
144	<i>Euphorbia pulcherrima cv.</i>	Poinsettia	192	<i>Pilea cadierei</i>	Aluminum Plant
145	<i>Eustoma grandiflorum</i>	Lisianthus	193	<i>Portulaca oleracea cv.</i>	Portulaca
146	<i>Exacum affine</i>	Persian Violet	194	<i>Primula malacoides cv.</i>	Primrose
147	<i>Ficus benjamina cv</i>	Benjamin Fig	195	<i>Ranunculus hybrid cv.</i>	Ranunculus
148	<i>Ficus elastica cv</i>	Rubber Plant	196	<i>Rhododendron simsii cv.</i>	Florist Azalea
			197	<i>Rosa hybrid cv</i>	Hybrid Tea Rose

198	Rumohra adiantiformis	Leatherleaf Fern
199	Saintpaulia ionantha cv.	African Violet
200	Salvia splendens cv.	Salvia
201	Sansevieria trifasciata cv.	Snake Plant
202	Schefflera arboricola	Dwarf Schefflera
203	Schlumbergera bridgesii	Christmas Cactus
204	Sempervivum hybrid cv.	Hens and Chicks
205	Senecio x hybridus cv.	Cineraria
206	Sinningia speciosa Fyfiana Group cv.	Florist Gloxinia
207	Solidago hybrid cv	Solidago
208	Solenostemon	Coleus

	scutellarioides	
209	Spathiphyllum	Peace Lily
210	Stephanotis floribunda	Stephanotis
211	Strelitzia reginae	Bird of Paradise
212	Syngonium podophyllum	Nephtytis
213	Tagetes species cv.	Marigold
214	Tradescantia zebrine	Silver Inch plant
215	Tulipa cv.	Tulip
216	Verbena hybrid cv.	Verbena
217	Viola x wittrockiana cv.	Pansy
218	Zantedeschia hybrid cv.	Calla Lily
219	Zinnia cv.	Zinnia

# Floriculture Equipment and Supply Identification List

301	#100 Ribbon (satin, sheer, wired)
302	#3 Ribbon (satin, sheer, wired)
303	#40 Ribbon (satin, sheer, wired)
304	#9 Ribbon (satin, sheer, wired)
305	18-Gauge floral wire
306	28-Gauge floral wire
307	Anvil-and-blade pruner
308	Backflow preventer
309	Bouquet sleeve
310	Bulb planter
311	Cardette
312	Cell pack containers
313	Ceramic container
314	Chemical resistant gloves
315	Chenille stem
316	Coconut coir
317	Compressed air sprayer
318	Corsage box
319	Corsage pin
320	Corsage snips
321	Drip emitter, irrigation
322	Dry foam
323	Dust mask
324	Duster
325	Ellepot propagation cubes
326	Enclosure card
327	Fern greening pins
328	Fertilizer injectors
329	Floral adhesive
330	Floral foam
331	Floral knife
332	Floral preservative
333	Floral stem tape

334	Fogger
335	Gas mask
336	Glass vase
337	Glue gun
338	Glue pan
339	Glue sticks
340	Granular fertilizer
341	Greenhouse thermostat
342	Hanging basket
343	Hearing protection
344	Hook-and-blade pruners (bypass pruners)
345	Hose punch
346	Hose repair coupling
347	Hose-end repair fitting
348	Hose-end sprayer
349	Hose-end washer
350	Impulse sprinkler
351	Drip Irrigation tape
352	Irrigation timer
353	Mist nozzle (mist bed)
354	Nosegay holder
355	Nursery container
356	Oscillating sprinkler
357	Peat moss
358	Peat pots
359	Pest strips
360	pH testing meter
361	Polyethylene film
362	Polyethylene pipe
363	Pot covers
364	Propagation mat
365	Propagation trays
366	PVC (polyvinylchloride) pipe
367	PVC pipe cutter
368	Resin-coated fertilizer

369	Respirator
370	Ribbon shears
371	Rice hulls
372	Rockwool propagation cubes
373	Rose and stem flower stripper
374	Safety goggles
375	Sand
376	Scoop shovel
377	Shade fabric
378	Sharpening stone
379	Sheet moss
380	Siphon injector
381	Soil moisture meter
382	Solenoid valve
383	Spaghetti tubing (1/4" diameter or less)
384	Spanish moss
385	Sphagnum moss
386	Spray suit
387	Square point (flat) shovel
388	Styrofoam
389	Surestik cling
390	Tulle
391	Vermiculite
392	Water breaker
393	Water picks
394	Water soluble fertilizer
395	Water tubes
396	Waterproof container tape
397	Wire cutter
398	Wooden pick
399	Wrist corsage holder

# Floral Arrangement Practicum Rubric

**100 POINTS**

<b>Name</b>	<b>Member Number</b>	<b>Chapter/State</b>	<b>Team Number</b>
<b>Judge Name</b>	<b>Judge's Signature</b>	<b>Date</b>	

	<b>Excellent</b>	<b>Good</b>	<b>Needs Improvement</b>	<b>Member Score</b>
<b>Arrangement</b>	<b>85</b>			
Category interpretation	<b>4-5 points</b> Design follows given scenario within provided parameters and correlates to the appropriate style, shape and design	<b>2-3 points</b> Design slightly followed given scenario but is somewhat lacking in appropriate style, shape, or design	<b>0-1 points</b> Design does not follow given scenario and/or lacks in following the given style, shape, or design	
Balance	<b>7-10 points</b> Design is both visually and physically balanced	<b>4-6 points</b> Design is slightly off balanced	<b>0-3 points</b> Design is not balanced visually or physically	
Creativity	<b>7-10 points</b> Design expresses advanced creative ability and advanced design techniques	<b>4-6 points</b> Design expresses some creative ability and minimal advanced design techniques	<b>0-3 points</b> Design lacks creative ability and Demonstrates limited design techniques	
Depth	<b>7-10 points</b> Placement of materials at different levels is evenly distributed throughout	<b>4-6 points</b> Placement of materials are somewhat distributed evenly	<b>0-3 points</b> Placement of items are not distributed evenly	
Color	<b>7-10 points</b> Color is used evenly/harmoniously throughout	<b>4-6 points</b> Color is used somewhat correctly	<b>0-3 points</b> Color is not used correctly	
Focal emphasis	<b>7-10 points</b> Design has one area that attracts the eye	<b>4-6 points</b> Design somewhat has a clear focal point	<b>0-3 points</b> Design does not have a clear focal point	
Line / Rhythm	<b>7-10 points</b> Design has a clear sense of movement created visually by the placement of floral materials	<b>4-6 points</b> Design has a somewhat clear sense of movement created visually by the placement of floral materials	<b>0-3 points</b> Design has no clear sense of movement created visually by the placement of floral materials	
Mechanics	<b>7-10 points</b> Techniques used to keep floral material secure and stable are hidden or done neatly	<b>4-6 points</b> Techniques used to keep floral material secure and stable are somewhat hidden or done neatly	<b>0-3 points</b> Techniques used to keep floral material secure and stable are not hidden or done neatly	
Scale / Proportion	<b>4-5 points</b> Design is the correct size based on container given	<b>2-3 points</b> Design is slightly out of proportion	<b>0-3 points</b> Design is not in proportion with container given	
Unity	<b>4-5 points</b> All principles of design are present and executed well	<b>2-3 points</b> Some principles of design are executed well	<b>0-1 points</b> None or few principles of design are executed well	
<b>ITEMIZED LIST OF COSTS</b>	<b>15</b>			
Bill of Sale Completion	<b>4-5 points</b> Bill of Sale is completed entirely with a complete list of all items used and totaled	<b>2-3 points</b> Bill of Sale is not entirely complete or missing some items used in the design	<b>0-1 point</b> Bill of Sale is missing a lot of detail and/or missing several items used in the design	
Individual Pricing and Quantity Used	<b>4-5 points</b> All items used in the design are individually listed with correct individual price and quantity totally accurately	<b>2-3 points</b> Some items added incorrectly, or quantity used listed incorrectly.	<b>0-1 point</b> Significant number of items added or listed incorrectly	
Total Bill of Sale Pricing Accuracy	<b>4-5 points</b> Overall bill is legible with labor calculated correctly, and total price is listed accurately within +/- \$0.50 of \$55.00	<b>2-3 points</b> Overall bill includes minor errors, includes parts that are difficult to read or final price slightly off target goal of \$55.00	<b>0-1 points</b> Overall bill includes major errors, difficult to read, or well off target goal of \$55.00.	
<b>TOTAL SCORE (100 points possible)</b>				

# Floral Arrangement Itemized List of Costs

<b>Name</b>	<b>Member Number</b>	<b>Chapter/State</b>	<b>Team Number</b>
<b>Judge Name</b>	<b>Judge's Signature</b>	<b>Date</b>	

Quantity	Flower/Foliage	Unit Cost	Total
<b>TOTAL FLOWER/FOLIAGE MATERIAL COST</b>			

Quantity	Material Used	Unit Cost	Total
<b>TOTAL HARD GOODS COST</b>			

<b>Total Plant Material Cost</b>	
<b>Total Hard Goods Cost</b>	
<b>Sub Total</b>	
<b>TOTAL ARRANGEMENT COST*</b>	

*Labor 20%*

*\*Participants will be provided the retail price of flowers and foliage that they will use in their arrangement by the event official at the beginning of the practicum. The markup is built into the retail price of the flowers and the foliage used in the arrangement.*

# Asexual Plant Propagation Rubric

## 100 POINTS

Name	Member Number	Chapter/State	Team Number	
Judge Name	Judge's Signature	Date		
	Excellent	Good	Needs Improvement	Member Score
Proper sanitation and equipment use	<b>4-5 points</b> Thoroughly covering cutting instrument with a sterile solution	<b>2-3 points</b> Cleaning cutting instrument with solution	<b>0-1 point</b> No sanitation procedures followed or not followed properly	(X2)
Selection of cuttings	<b>4-5 points</b> Small uniform terminal shoot cuttings	<b>2-3 points</b> Used some cuttings of the same size and type	<b>0-1 point</b> too large, nonterminal shoots, or not uniform in size	(X2)
Making cuttings	<b>5-6 points</b> Straight, flush even cut of the basal end	<b>3-4 points</b> Some cuttings cut properly and some incorrectly cut	<b>0-2 points</b> basal end cut at angle or damaged	(X2)
Preparation of cuttings for sticking in growing media	<b>5-6 points</b> Selected/ prepared cuttings that did not require further preparation	<b>3-4 points</b> Selected cuttings that required removal of damaged and/or unneeded foliage	<b>0-2 points</b> left damaged and/or unnecessary foliage on plant	(X2)
Use of rooting hormone	<b>4-5 points</b> Poured correct amount of rooting hormone into separate container, applied hormone & tapped off excess amount	<b>2-3 points</b> Too much or too little put in separate container, applied correctly but did not tap off extra hormone	<b>0-1 point</b> applied directly from source container and/or did not use rooting hormone	(X2)
Selection of growing media	<b>5-6 points</b> Select best rooting medium for optimum rooting	<b>3-4 points</b> Select moderate but not best choice for optimum rooting	<b>0-2 points</b> selected incorrect rooting medium	(X2)
Sticking of cuttings in growing media	<b>5-6 points</b> Creating a dibble in media prior to placing cutting, placing at proper depth, firming media correctly	<b>3-4 points</b> Correctly demonstrated at least 1 or 2 of the correct principles	<b>0-2 points</b> no prior hole made, planted too deep, or left unstable	(X2)
Cuttings labeled correctly	<b>4-5 points</b> Labeled with date propagated, plant name, and cultivar	<b>2-3 points</b> Labeled with some but not all information required	<b>0-1 point</b> no label present or labeled with incorrect information	(X2)
Response to questions	<b>5-6 points</b> Answered judges questions correctly	<b>3-4 points</b> Answered some questions correctly	<b>0-2 points</b> Did not or incorrectly answered questions	(X2)
<b>TOTAL SCORE (100 POINTS POSSIBLE)</b>				

# Pinching Plants Rubric

## 100 POINTS

Name	Member Number	Chapter/State	Team Number
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Judge Name	Judge's Signature	Date
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	Excellent 8-10 points	Good 4-7 points	Needs Improvement 0-3 points		Member Score
Selection of plant part to pinch	Followed given scenario to determine correct pinch	Some pinches were made in incorrect places on plant	Most all pinches were made on incorrect places	(x2)	
Use of proper procedures in making pinches	Used proper tools and/or techniques in making pinches	Used some but not all proper tools and/or techniques in making pinches	Used few or not any of proper tools and/or techniques in making pinches	(x2)	
Made proper pinches	Plant pinched correctly to get desired effect per instructions	Some pinches were too little or too much to get desired effect per instructions	Most or all of plant pinches would not allow the plant to reach desired effect per instructions	(x2)	
Overall effect of making pinches	The plant will reach desired outcome after pinching, no damage to plant parts left after pinch, and pinches correctly done	The plant will have some difficulty achieving desired outcome, some plant parts left have damage, and some pinches not done correctly	The plant will not be able to achieve desired outcome, much damage to plant part left, and most pinches not done correctly	(x2)	
Answered questions correctly	Answered questions correctly	Answered some questions correctly	Did not or incorrectly answered questions	(x2)	
<b>TOTAL SCORE (50 POSSIBLE POINTS)</b>					

# Potting of Young Plants Practicum Rubric

**100 POINTS**

Name	Member Number	Chapter/State	Team Number
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Judge Name	Judge's Signature	Date
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	Excellent	Good	Needs Improvement		Member Score
Potting Process					
Selection of plugs or liners	5-6 points Plugs/liners are uniform in size and shape, correct number selected based on pot size provided	3-4 points Plugs/liners are somewhat uniform in size and shape, just slightly off in selecting the correct number	0-2 points Plugs/liners are not uniform in size and shape, correct number not selected based on pot size provided	(x2)	
Proper planting depth	5-6 points Hole is made prior to placing plant in soil, the entire root system is covered, leaving proper stem length visible	3-6 points minor amount of roots are showing, planted slightly too deep	0-2 points A large amount of roots are showing or plant stem is covered with soil	(x2)	
Labeling of plant/pot	5-6 points Labeled with date planted, plant name, and cultivar	3-4 points Labeled with some but not all information required	0-2 points no label present or labeled with incorrect information	(x2)	
Correct growing medium level in pot	5-6 points Growing media is filled to the inner lip of the pot, leaving enough room to water the plant	3-4 points Growing media is filled slightly too high or too low	0-2 points Growing media is left very low or completely fills up the pot	(x2)	
Plug or liner arrangement and angle	5-6 points Plugs/Liners evenly spaced for pot size given and plugs/liners planted in upright position	3-4 points plugs/liners planted slightly too close or too far apart, planting slightly tilting	0-2 points Plugs/liners not spaced corrected and not planted upright	(x2)	
Firmness of growing medium	5-6 points After planting, growing media is tapped/ pressed firmly around each plant leaving the plant upright	3-4 points Growing media is left slightly loose or left slightly too firm restricting plant growth	0-2 points Growing media is not firmed after planting or left entirely too firm restricting plant growth	(x2)	
General appearance (free from handling damage)	5-6 points Final product presented to the judge with plants upright, pot clean, and in sellable condition	3-4 points Final product presented to the judge in slightly sellable condition	0-2 points Final product presented to judge in non-sellable condition	(x2)	
Response to questions	5-6 points Answered questions correctly	3-4 points Answered some questions correctly	0-2 points Did not or incorrectly answered questions	(x2)	
<b>TOTAL (100 POINTS POSSIBLE)</b>					



# Making a Mixed Combination Planter Rubric

**75 POINTS**

Name	Member Number	Chapter/State	Team Number	
Judge Name	Judge's Signature	Date		
	Excellent	Good	Needs Improvement	Member Score
Selection of products	<b>6-8 points</b> Plants selected correctly to match scenario given and pot size	<b>3-5 points</b> Some of the plant selected match pot size and given scenario	<b>0-2 points</b> Plants selected do not match pot size or scenario	
Preparation of plant materials	<b>6-7 points</b> Soil is filled to the correct level, plants are planted at correct depth, and soil firmed after planting	<b>3-5 points</b> Some of the items for correct planting are missing or incorrectly demonstrated	<b>0-2 points</b> Plants were not prepared properly and/or soil was not prepared properly	
Labeling of combo	<b>7-10 points</b> Labeled with date planted, plant names, and cultivars	<b>4-6 points</b> Labeled with some but not all information required	<b>0-3 points</b> no label present or labeled incorrectly	
Balance	<b>9-12 points</b> Plants are evenly spaced within the pot, plants are physically and visually balanced with container size	<b>5-8 points</b> Plants are slightly off balance, placement of plants does not align with physical or visual display	<b>0-4 points</b> Plants are not balanced visually or physically	
Design	<b>11-15 points</b> Principles of design are followed while completing the mixed planter	<b>6-10 points</b> Some of the principles of design are followed	<b>0-5 points</b> None or few of the principles of design we followed when completing the planter	
Attractiveness	<b>10-13 points</b> Mixed Planter is presented in a sellable fashion, no broken pieces/part, pot clean, and plants faced in pot	<b>5-9 points</b> Mixed Planted is presented in a somewhat sellable condition	<b>0-4 points</b> Mixed Planter is presented in poor, unfinished, or non-sellable condition	
Pricing	<b>7-10 points</b> Price sheet has each plant used identified correctly with correct quantity used. Sheet includes no or minor calculation errors and within +/- \$0.50 of \$35	<b>4-6 points</b> Price sheet has 1 or 2 missing plants. Sheet also includes errors on quality used or totaled incorrectly	<b>0-3 points</b> Price sheet is incomplete and/or totaled inaccurately	
<b>TOTAL SCORE (75 POINTS POSSIBLE)</b>				

# Mixed Combination Planter Itemized List of Costs

Name Member Number Chapter/State Team Number

Judge Name Judge's Signature Date

Quantity	Plant Material	Unit Cost	Total
<b>TOTAL FLOWER/FOLIAGE MATERIAL COST</b>			

Quantity	Material Used	Unit Cost	Total
<b>TOTAL HARD GOODS COST</b>			

Total Plant Material Cost

Total Hard Goods Cost

*Sub Total*

**TOTAL MIXED PLANTER COST**


Date \_\_\_\_\_

# Making and Packing a Corsage Rubric

**75 POINTS**

Name	Member Number	Chapter/State	Team Number	
Judge Name	Judge's Signature		Date	
	<b>Excellent</b>	<b>Good</b>	<b>Needs Improvement</b>	<b>Member Score</b>
<b>Mechanical Application</b>	<b>11-15 points</b> Techniques used to keep floral material secure and stable are hidden or done neatly	<b>6-10 points</b> Techniques used to keep floral material secure and stable are somewhat hidden or done neatly	<b>0-5 points</b> Techniques used to keep floral material secure and stable are not hidden or done neatly	
<b>Color</b>	<b>7-10 points</b> Color is used evenly/harmoniously throughout	<b>4-6 points</b> Color is used somewhat correctly	<b>0-3 points</b> Color is not used correctly	
<b>Creativity</b>	<b>11-15 points</b> Design expresses a high level of creative ability and advanced design techniques.	<b>6-10 points</b> Design expresses some creative ability and minimal advanced design techniques	<b>0-3 points</b> Design lacks creative ability and demonstrated limited design techniques	
<b>Balance</b>	<b>7-10 points</b> Design is physically and visually balanced	<b>4-6 points</b> Design is slightly off balance	<b>0-3 points</b> Design does not follow the principles of design regarding balance	
<b>Design &amp; Category Interpretation</b>	<b>4-5 points</b> Design follows scenario given for an overall cohesive design	<b>2-3 points</b> Design somewhat follows scenario given and overall design is somewhat cohesive	<b>0-1 points</b> Design does not follow given scenario	
<b>Bill of Sale Completion</b>	<b>7-10 points</b> Bill of Sale is completed entirely with a complete list of all items used	<b>5-8 points</b> Bill of Sale is not entirely complete or missing some items used in the design	<b>0-4 points</b> Bill of Sale is missing a lot of detail and/or missing several items used in the design	
<b>Pricing Accuracy (accuracy of pricing identification)</b>	<b>7-10 points</b> All items used in the design are listed with correct price, totally accurately, labor calculated corrected, within 50 cents up or down of \$25.00	<b>4-6 points</b> Some items added incorrectly and/or final price slightly off target goal of \$25.00	<b>0-3 points</b> Significant number of items added incorrectly or way off target goal of \$25.00.	
<b>TOTAL SCORE (75 POINTS POSSIBLE)</b>				

# Corsage Itemized List of Costs

Name	Member Number	Chapter/State	Team Number
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Judge Name	Judge's Signature	Date
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Quantity	Flower/Foliage Used	Unit Cost	Total
<b>TOTAL FLOWER/FOLIAGE MATERIAL COST</b>			

Quantity	Material Used	Unit Cost	Total
<b>TOTAL HARD GOODS COST</b>			

*Total Flower/Foliage Material Cost*

*Total Hard Goods Cost*

*Subtotal*

*Labor 20 %*

**TOTAL CORSAGE COST**


# Disorder Practicum Scorecard

75 POINTS

Name Member Number Chapter/State Team Number

		Member Answer	Possible Points	Member Score
1.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
2.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
3.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
4.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
5.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
6.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
7.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
8.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	

		Member Answer	Possible Points	Member Score
9.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
10.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
11.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
12.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
13.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
14.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
15.	Classification #:		1	
	Identification #:		2	
	Chemical Control #:		1	
	Cultural/Biological Control #:		1	
<b>TOTAL POINTS</b>			75	

**CLASSIFICATION**

- 1 Diseases
- 2 Insects/Pests/Mites
- 3 Nutritional/Environmental

**IDENTIFICATION**

- 01 Aphids
- 02 Black Leaf Spot
- 03 Botrytis – Grey Mold
- 04 Cold Temperature (freeze)
- 05 Cold Water Damage
- 06 Damping-off
- 07 Downy Mildew
- 08 Ethylene Damage
- 09 Fungus Gnats
- 10 Insufficient Watering
- 11 Iron Deficiency
- 12 Leaf Miner
- 13 Leafhopper
- 14 Mealybugs
- 15 Nitrogen Deficiency
- 16 Phosphorus Deficiency
- 17 Powdery Mildew
- 18 Root Rot
- 19 Rust
- 20 Scale
- 21 Shore Flies
- 22 Snails/ Slugs
- 23 Spider Mites
- 24 Stem Rot
- 25 Thrips
- 26 Tospovirus (INSV and TSWV)
- 27 Whiteflies

**CHEMICAL CONTROL**

- 1 Fungicide
- 2 Insecticide
- 3 Miticide
- 4 Mulluscicide
- 5 No Treatment Listed

**CULTURAL CONTROL**

- 1 Apply Complete Fertilizer
- 2 Correct/Adjust Temperature
- 3 Correct/Adjust Watering
- 4 Ladybird Beetles
- 5 Nematodes
- 6 Parasitic Wasps
- 7 Predatory Mites
- 8 Reduce Relative Humidity
- 9 No Treatment Listed

# Team Activity Rubric

**800 POINTS**

Name	Member Number	Chapter/State	Team Number
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Judge Name	Judge's Signature	Date
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Indicator	Very strong evidence of skill 5-4 points	Moderate evidence of skill 3-2 points	Weak evidence of skill 1-0 points	Points Earned	Weight	Total Score
<b>Preparation</b>						<b>525</b>
Established team leadership role	One member seemed to assume leadership and others cooperated.	One member seemed to assume leadership.	No leadership role(s) were established.		X 10	
Member participation in planning activity	All members participated in discussion, shared ideas, and developed a plan of action to accomplish the assigned task.	Limited member discussion occurred before work began.	No member discussion occurred before work began.		X 25	
Developed a workable plan to reach team project goal	Duties were assigned to all team members, and responsibilities were equally assigned. Input was given by entire team.	Duties were assigned and all had near equal parts. Most of the team provided input to the plan.	Duties were not clearly assigned, and participation varied. At least one team member did not contribute to the plan.		X 25	
Teamwork displayed during the entire planning process	Team members worked together the entire time to complete the assigned task and were supportive of each other.	Two or three team members worked together to complete the assigned task.	Two member or less worked together to complete the assigned tasks.		X 15	
Technical Value/ Correct Information/ Realistic Plan created	Ideas discussed are creative, include accurate information, and realistic for the size and scope of the chapter	Ideas discussed lack creativity but are accurate and realistic	Ideas discussed are not realistic but include some errors.		X 15	
Plan outlined to complete assigned task and present a sellable proposal or final product	Clearly defined plan is developed with input from all members; team members have a clear understanding of responsibilities during presentation	Vaguely defined plan is created, and presentation is discussed but not clearly laid out	Little or not thought to final plan and/ or plan proposal.		X15	
<b>Team Presentation Portion of the Team Activity</b>						<b>275</b>
Member participation during presentation	All members participated, listened to the presenter and team leadership was provided.	All members participated but there was no clear leadership or interaction between members.	One or more members had almost no participation.		X 20	
Quality/ completion of assigned tasks	All team members displayed enthusiasm about the final product and were positive about the proposed solution.	All team members share ideas, but 1-2 tasks are left unaddressed or not up to industry standards.	Not all team members participated and/or more than 2 tasks were left incomplete.		X 35	
<b>TOTAL POINTS (800 possible points)</b>						