



# Floriculture

## Purpose

*The New Jersey 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 which are delivered through the agriculture 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

The complete rules, policies and procedures relevant to all New Jersey FFA Career and Leadership Development Events may be found in the CDE & LDE Event Participation Policy:

[https://nj.gov/agriculture/ag\\_ed/ffa/activity/CDE\\_LDE\\_Policy.pdf](https://nj.gov/agriculture/ag_ed/ffa/activity/CDE_LDE_Policy.pdf)

- Teams will consist of four members, and all four scores will count toward the team score.
- The team score is comprised of the combined scores of each individual and the team activity in which all team members will participate.
- Official Dress is 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.
- Any participant caught cheating during the event will be expelled from the event.
- Participants will not be allowed to swap or share tools (calculators, scissors, wire cutters, etc.) with teammates or other participants.
- Contestants will not be allowed to bring any materials into the competition area that could be used to enhance the creativity of the design. ALL materials that the students would need to create the design will be provided. The only materials that the students are allowed to bring are outlined in the event format below.
- Any assistance given to a participant from any source during the event, other than a floriculture event official, will be sufficient cause to eliminate the team from the event.

- Participants are NOT allowed to use (or have visible) electronic devices during the event, unless for medical reasons or a portion of the event requires usage. This includes cell phones, tablets, etc. Participants will be allowed to use calculators, if specified for that event; however, cell phone calculators and graphing calculators are not permitted! Failure to adhere to these rules will result in disqualification.
- All individuals participating will judge in a cooperative manner following the rules set forth by the event coordinator.
- No school/chapter will use Rutgers University or Delaware Valley University facilities or locations for the training of teams. Contact with University faculty and staff is permissible. **Penalty will be disqualification.**
- This event will be scored using “Scan-tron” sheets. It is important for students to listen to directions and fill out the sheets correctly in order to receive credit. Sample scan-tron sheets are available for practice on the State Activity Guide. This event uses the Universal Form H scan-tron sheet.
- There will be no separate alternate teams.
- A student may not compete in more than one event during the New Jersey FFA Spring Career Development Events.
- The State level competition fee of \$11 per contestant will be paid by the competing school. If a chapter is at least blue affiliated, registration to state FFA career development events is waived.

## Event Format

### MATERIALS STUDENTS NEED TO PROVIDE:

- Clean clipboard, free of notes
- Two sharpened No. 2 pencils
- Floral cutters/clippers
- Ribbon shears
- Wire cutters
- Floral knife
- Calculator- Should be battery operated, non-programmable and non-scientific (basic five function only). No other calculators are allowed to be used during the event, including cell phone calculators.
- Participants may also bring an apron, and/or a tool belt and towels.

## EVENT SNAPSHOT

- **Identification of Plant Materials and Equipment** – 30 minutes, 40 specimens
- **General Knowledge Examination & Problem Solving/Decision Making** – 30 minutes, 25 questions
- **One Annual Practicum** – 30 minutes
- **One Rotational Practicum** – 30 minutes each
- **Team Activity** – 30 minutes

### INDIVIDUAL ACTIVITIES

#### *Identification of Plant Materials and Equipment (200 points)*

Forty (40) 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. Five points will be awarded for each specimen that is correctly identified. Each participant will be allowed 30 minutes to complete this phase of the event.

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

Participants will answer 20 multiple choice questions that cover all areas of the floriculture industry as reflected in the event objectives. This phase of the event will test participants' knowledge and understanding of basic biological and scientific principles of producing and marketing flowers, plants and foliage. Each participant will be allowed 30 minutes to complete the exam. Each answer has a value of 10 points. This portion of the event will be conducted concurrently with Problem-solving/Decision-Making.

### *Problem-Solving/Decision-Making (50 points)*

Each participant will solve five problems related to the various aspects of the floriculture industry identified in the event objectives. Each problem will describe the situation or create the problem and list four possible solutions to the problem. The participant must decide on the best possible solution to the problem. All materials and information necessary to solve the problem will be available to the participant as he/she solves the problem. Each participant will be allowed 30 minutes to complete this phase of the event. Each correct solution has a value of 10 points. This portion of the event will be conducted concurrently with the General Knowledge Examination.

### *Annual Practicum*

#### *Growing Procedures (100 points)*

One of the three activities listed below will be determined annually. Thirty minutes will be allowed for this round. For each participant ten minutes will be allowed for this section, including questions from the judges. Seven (7) minutes to complete the assigned task, 1 minute for the 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, an appropriate pot or pots, a potting medium, an 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 with the parent plant materials and all other materials needed to propagate plants asexually. Participants will take cuttings from the plant provided then using the available materials and place 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 one annual practicum, one rotational practicum will be selected from the list below for each noted year. Three practicums will be identified by the event coordinator at least 1 month prior to the event; however, only one practicum will be conducted on the day of the event.

- ❖ **SELLING ONE-ON-ONE**

Each participant will assume the role of a salesperson in a floriculture business (grower, florist shop, garden center, etc.) A customer (judge) with a specific need will approach the participant. The participant will help the customer meet his or her needs by using sales skills. All supplies, information and the business setting in which the participant works will be provided. Ten minutes will be allowed for this practicum. Of the 10 minutes, participants will be allowed three minutes to review the given scenario, five minutes for dialogue with the customer and completion of the sales form. Judges will be allowed two minutes to score the participant. Scoring criteria are presented on the Selling One-on-One Practicum Rubric, which will be recorded by a judge.

- ❖ **MEDIA SELLING**

Each participant will be asked to create or evaluate advertising from the following media sources:

- Newspaper/catalog ad
- Radio script
- Newsletter
- Brochure/flyer
- Email
- Social media
- Facebook
- Twitter
- Video – YouTube
- Web homepage

All information and materials needed to develop the advertisement will be provided. Up to thirty minutes will be allowed for this practicum depending on the task assigned. Scoring criteria are presented on the Media Selling Practicum Rubric, which will be recorded by a judge.

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

Each participant will make a \$35 retail priced mixed combination planter. All plant materials, growing media and containers will be provided. Thirty (30) 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.

❖ **CREATE AND PACKAGE A BODY FLOWER PIECE (75 POINTS)**

Each participant will make and package a \$25 retail-priced body flower including 20% labor. These pieces could include any of the following: corsages, boutonnieres, floral jewelry, crowns, arm, wrist or ankle pieces, and hair accessories. 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 30 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 Create and Package a Body Flower Piece 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. Thirty (30) minutes will be allowed for this event. Refer to the Disorder Practicum Scorecard for additional details.

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

**TEAM ACTIVITY (200 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. Thirty minutes will be allowed for completing the activity. All materials, with the exception of floral tools, needed to complete the assignment will be provided.

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

Phase	Individual Points	Team Points
Plant and Equipment Identification	200	800
General knowledge Exam & Problem solving/ Decision Making	250	1,000
Annual practicum – 1 selected	100	400
Rotational practicum – 1 selected (75 pts each)	75	300
Team Activity		200
<b>TOTAL</b>	625	2,700

(1,680 team points are needed to advance to Nationals)

## TIEBREAKERS

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

### Individual

1. Written Exam & Problem Solving/Decision Making
2. Plant and Equipment Identification
3. Annual Practicum

### Team

1. Written Exam & Problem Solving/Decision Making
2. Plant and Equipment Identification
3. Annual Practicum

# Awards

Awards will be presented to individuals and the first-place team based on their rankings at the CDE awards ceremony at the New Jersey State FFA Convention. Awards are sponsored by the National FFA Foundation, New Jersey FFA Foundation, and/or the New Jersey FFA Association.

The 1st place team will represent New Jersey at the National FFA Convention in October.

### Individual

- Overall Medals
  - Medals – Top three individuals
- H.O. Sampson Certificates (hands-on sections ONLY)
  - Certificate – Top five individuals

### Team

- Plaque Sponsored by the National FFA Foundation – 1st place

## 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.

## Request for Reasonable Accommodations

The New Jersey FFA Association is committed to providing equal access to our events and activities for all people. Use this form to request a reasonable accommodation or assistance at least 3 weeks before any state-level events: <https://form.jotform.com/NJFFA/accommodations-request>. A new form will need to be submitted for each event in which a reasonable accommodation is being requested. This information will be kept confidential and will be used only to process the request. Our staff will review the request upon receipt and contact the requestor with additional information. The association cannot guarantee accommodations or assistance if a form is received less than 3 weeks before an event. Accommodations being requested that require the assistance of another person (nurse, interpreter, scribe, reader, etc.) is the responsibility of the school/requestor. It is also the school/requestor's responsibility to provide any approved equipment to aide in the accommodation process, if applicable.

## Artificial Intelligence (AI) Policy and Guidelines

The standard operative procedures allow FFA members to use AI tools to assist them in their learning. Appropriate uses of AI may include generating ideas for any FFA-related assignment, project, contest and award application; checking facts of a phenomenon; or checking for and correcting grammatical errors in a paper written by a member. Specific guidelines for appropriate use, including examples, is provided in the policy. To ensure clarity, a statement outlining ethical AI utilization will be added to program handbooks. Non-compliance with this policy represents plagiarism and will automatically disqualify a member.

Please visit the State Activity Guide, [Artificial Intelligence \(AI\) Policy 1.007](#) to view the full guidelines and best practices.

# Floriculture Plant Identification List

#	Botanical Name	Common Name	#	Botanical Name	Common Name
101	<i>Aechmea fasciata</i> cv.	Bromeliad	149	<i>Eucalyptus polyanthemos</i>	Silver Dollar Eucalyptus
102	<i>Ageratum houstonianum</i>	Floss Flower	150	<i>Euphorbia pulcherrima</i> cv.	Poinsettia
103	<i>Alocasia amazonica</i>	Amazon elephant ear	151	<i>Eustoma grandiflorum</i>	Lisianthus Praire gentian
104	<i>Aloe vera</i>	Aloe Plant	152	<i>Exacum affine</i>	Persian Violet
105	<i>Alstroemeria hybrid</i> cv.	Peruvian Lily	153	<i>Ficus benjamina</i> cv	Benjamin Fig
106	<i>Anemone coronaria</i>	Wind Flower	154	<i>Ficus elastica</i> cv	Rubber Plant
107	<i>Anethum graveolens</i> cv.	Dill	155	<i>Fiscus lyrate</i>	Fiddle Leaf Fig
108	<i>Angelonia hybrid</i> cv.	Angelonia	156	<i>Fragaria x ananassa</i> cv.	Strawberry Plant
109	<i>Anthurium x andraeanum</i> cv.	Flamingo Plant	157	<i>Freesia x hybrida</i>	Freesia
110	<i>Antirrhinum majus</i> cv.	Snapdragon	158	<i>Gardenia jasminoides</i>	Gardenia
111	<i>Aphelandra squarrosa</i> cv.	Zebra Plant	159	<i>Gerbera jamesonii</i>	Gerbera Daisy
112	<i>Araucaria heterophylla</i>	Norfolk Island Pine	160	<i>Gladiolus x hortulanus</i> cv.	Gladiolus
113	<i>Asparagus densiflorus</i>	Fox Tail Fern	161	<i>Gomphrena hybrid</i> cv.	Globe Amaranths
114	<i>Aster pringlei</i>	Aster	162	<i>Gypsophila elegans</i> cv.	Baby's Breath
115	<i>Astilbe hybrid</i> cv.	Astilbe	163	<i>Hedera helix</i> cv.	English Ivy
116	<i>Begonia x semperflorens – cultorum</i>	Wax Begonia	164	<i>Helianthus annuus</i>	Sunflower
117	<i>Begonia x tuberhybrida</i> cv.	Tuberous Begonia	165	<i>Hemerocallis</i> cv.	Daylily
118	<i>Caladium x hortulanum</i> cv.	Caladium	166	<i>Hibiscus</i> spp.	Hibiscus
119	<i>Calathea insignis</i>	Rattlesnake plant	167	<i>Hippeastrum hybrid</i> cv.	Amaryllis
120	<i>Calibrachoa hybrid</i> cv.	Million Bells	168	<i>Hosta</i> cv.	Hosta Plantain Lily
121	<i>Callistephus chinensis</i> cv.	China Aster	169	<i>Hoya carnosa</i>	Wax Plant
122	<i>Campanula hybrid</i> cv.	Bell Flower	170	<i>Hyacinthus orientalis</i> cv.	Hyacinth
123	<i>Canna x generalis</i> cv.	Canna	171	<i>Hydrangea macrophylla</i>	Big Leaf Hydrangea
124	<i>Capsicum annuum</i>	Ornamental Pepper	172	<i>Hypoestes phyllostachya</i>	Polka-Dot plant
125	<i>Celosia argentea</i> cv.	Cockscomb	173	<i>Impatiens hawkeri</i>	New Guinea Impatiens
126	<i>Centaurea cyanus</i>	Cornflower, Bachelor's Button	174	<i>Impomoea batatas</i> cv.	Sweet potato vine
127	<i>Chamaedorea elegans</i>	Parlor Palm	175	<i>Iris x xiphium</i> cv.	Dutch Iris
128	<i>Chamelaucium uncinatum</i>	Waxflower	176	<i>Justica brandegeana</i>	Shrimp Plant
129	<i>Cholorophytum comosum</i> cv.	Spider Plant	177	<i>Kalanchoe x blossfeldiana</i> cv.	Kalanchoe
130	<i>Chrysanthemum x morifolium</i>	Chrysanthemum	178	<i>Leucanthemum x superbum</i>	Shasta Daisy
131	<i>Clematis hybrid</i> cv.	Clematis	179	<i>Liatris spicata</i>	Blazing stars
132	<i>Codiaeum variegatum pictum</i>	Croton	180	<i>Lilium hybrid</i> cv.	Asiatic or Oriental Lily
133	<i>Colocasia esculenta</i>	Taro	181	<i>Limonium sinuatum</i>	Statice
134	<i>Cordyline fruticose</i>	Ti Plant	182	<i>Lobularia maritima</i>	Alyssum
135	<i>Crassula argentea</i>	Jade Plant	183	<i>Mandevilla</i> spp.	Rock Trumpet
136	<i>Cycas revoluta</i> cv.	Sago Palm	184	<i>Maranta leuconeura</i>	Prayer Plant
137	<i>Cyclamen x persicum</i> cv.	Cyclamen	185	<i>Matthiola incana</i> cv.	Stock
138	<i>Cymbidium</i> cv.	Cymbidium Orchid	186	<i>Monstera deliciosa</i>	Split Leaf Philodendron
139	<i>Cymbopogon</i> cv.	Lemongrass (herb)	187	<i>Narcissus hybrid</i> cv.	Daffodil or Narcissus
140	<i>Dahlia hybrid</i> cv.	Dahlia	188	<i>Nephrolepis exaltata</i> cv.	Boston Fern
141	<i>Delosperma</i>	Ice Plant	189	<i>Ocimum basilicum</i> cv.	Basil
142	<i>Delphinium consolida</i> cv.	Larkspur	190	<i>Opuntia</i> cv.	Cactus
143	<i>Dendrobium</i> cv.	Dendrobium Orchid	191	<i>Paeonia</i> cv.	Peony
144	<i>Dianthus caryophyllus</i> cv.	Carnation	192	<i>Paphiopedilum hybrid</i> cv.	Ladyslipper Orchid
145	<i>Dracaena Marginata</i>	Red Edge Dracaena	193	<i>Pelargonium x hortorum</i> cv.	Zonal Geranium
146	<i>Echinocactus</i> cv.	Barrel Cactus	194	<i>Pelargonium peltatum</i> cv.	Ivy Geranium
147	<i>Epipremnum aureum</i> cv.	Golden Pothos	195	<i>Pentas hybrid</i> cv.	Pentas star flower
148	<i>Erica carnea</i> cv.	Winter Heath			



196	Peperomia spp.	Peperomia
197	Petroselinum crispum cv.	Parsley
198	Petunia x hybrida cv.	Petunia
199	Phalaenopsis cv.	Moth Orchid
200	Philodendron scandens oxycardium	Heartleaf Philodendron
201	Pilea cadierei	Aluminum Plant
202	Portulaca oleracea cv.	Portulaca/Moss rose
203	Primula malacoides cv.	Primrose
204	Protea sp.	Protea
205	Ranunculus hybrid cv.	Ranunculus/ Buttercups
206	Rhododendron simsii cv.	Azalea
207	Rumohra adiantiformis	Leatherleaf Fern
208	Saintpaulia ionantha cv.	African Violet
209	Salvia splendens cv.	Salvia
210	Sansevieria trifasciata cv.	Snake Plant
211	Schefflera arboricola	Dwarf Schefflera
212	Schlumbergera bridgesii	Christmas Cactus

213	Sempervivum hybrid cv.	Hens and Chicks
214	Senecio cineraria	Dusty Miller
215	Senecio rowleyanus	String of Pearls
216	Solenostemon scutellarioides	Coleus
217	Solidago hybrid cv	Solidago
218	Spathiphyllum	Peace Lily
219	Stephanotis floribunda	Stephanotis
220	Strelitzia reginae	Bird of Paradise
221	Syngonium podophyllum	Arrowhead plant
222	Tagetes species cv.	Marigold
223	Tillandsia spp.	Air Plant
224	Tradescantia zebrine	Inch Plant
225	Tulipa cv.	Tulip
226	Verbena hybrid cv.	Verbena
227	Viola x wittrockiana cv.	Pansy
228	Zantedeschia hybrid cv.	Calla Lily
229	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

# Potting of Young Plants Practicum Rubric

**100 POINTS**

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

# 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**

<b>Name</b>	<b>Member Number</b>	<b>Chapter/State</b>	<b>Team Number</b>
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<b>Judge Name</b>	<b>Judge's Signature</b>	<b>Date</b>
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	<b>Excellent 8-10 points</b>	<b>Good 4-7 points</b>	<b>Needs Improvement 0-3 points</b>		<b>Member Score</b>
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 tool 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 outcomes 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 (100 POINTS POSSIBLE)</b>					

# One-on-One Practicum Rubric

**75 POINTS**

Name	Member Number	Chapter/State	Team Number	
<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>
Took initiative	<b>9-11 points</b> Student started dialogue, greeting and/or introduction given	<b>5-8 points</b> Dialogue required prompting by judge	<b>0-4 points</b> No introduction given, no dialogue started by student	
Communicated effectively	<b>9-11 points</b> Modeled active listening skills and asked appropriate questions	<b>5-8 points</b> Did not ask enough questions or had to be prompted by judge	<b>0-4 points</b> Student did not ask any questions	
Exhibited ambition and efficiency	<b>9-11 points</b> Student able to gauge customer service and move further with the sale	<b>5-8 points</b> Judge had to help, offer suggestions to accomplish the sale	<b>0-4 points</b> Low energy and judge had to pull information from student	
Diplomatic and courteous	<b>9-11 points</b> Displayed proper customer service, used polite terminology	<b>5-8 points</b> Sometimes displayed proper customer service skills	<b>0-4 points</b> Did not display proper customer service or polite terminology	
Knew merchandise, prices and policies	<b>9-11 points</b> Explain accurately what options were available while using correct terminology	<b>5-8 points</b> Was able to explain partial information/options to judge	<b>0-4 points</b> Did not give correct information about selling options	
Accuracy of information collected	<b>9-11 points</b> Order form filled out correctly with all required information	<b>5-8 points</b> Missing some information or some information listed incorrectly on order form	<b>0-4 points</b> Order form not filled out or filled out incorrectly	
Closed sale properly	<b>7-9 points</b> Student tried to increase the sale, displayed proper customer service, offered a thank you	<b>4-6 points</b> Did not increase sales or did not say thank you	<b>0-3 points</b> Did neither up sale or offer thank you	
<b>TOTAL SCORE (75 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 quantity used or totaled incorrectly	<b>0-3 points</b> Price sheet is incomplete and/or totaled inaccurately	
<b>TOTAL SCORE (75 POINTS POSSIBLE)</b>				





# Making and Packing a Body Flower Piece 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>
Mechanical Application	<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	
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	
Creativity	<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	
Balance	<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	
Design & Category Interpretation	<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	
Bill of Sale Completion	<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	
Pricing Accuracy (accuracy of pricing identification)	<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>				

# Body Flower Piece 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
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		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 - Floral Arrangement

**100 POINTS**

<b>Name</b>	<b>Member Number</b>	<b>Chapter/State</b>	<b>Team Number</b>
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<b>Judge Name</b>	<b>Judge's Signature</b>	<b>Date</b>
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	Excellent	Good	Needs Improvement	Member Score
<b>Arrangement 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 of design 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 designs 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 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>				

# TEAM ACTIVITY - Floral Arrangement 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>			

<b>Total Flower/Foliage Material Cost</b>	
<b>Total Hard Goods Cost</b>	
<b>Subtotal</b>	
<b>Labor 20 %</b>	
<b>TOTAL ARRANGEMENT COST*</b>	

*\*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 built into the retail price of the flowers and foliage used in the arrangement.*



