12.005

NEW JERSEY FFA

CAREER AND LEADERSHIP DEVELOPMENT EVENTS

Floriculture

2017-2021

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:

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

Objectives

- Identify plant materials, supplies, and equipment utilized in the floriculture industry.
- Demonstrate an understanding of the biological and scientific principles and 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 principles of design and develop related skills.
- 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.
- Operate, manage and maintain 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.

Event Rules

Each team will be comprised of four members.

- All four scores will be used to determine total team score.
- It is highly recommended that participants wear FFA Official Dress 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.
- All participants are expected to be prompt at their stations throughout the event. No

provision will be made for tardiness, which will in most cases cause the late participant to lose event points.

- The event coordinator will assign the participants to a group. Participants must know their participant number and stay in their assigned group at all times or until told to change locations by the event officials.
- 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.
- All participants will be given an identification number by which they will be designated throughout the 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
- 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.

Materials students will need to prepare if announced at least 1 month prior to the event

- Prepared résumé

FLOW OF EVENT

- **Identification of Plant Materials and Equipment** – 30 minutes
- **General Knowledge Examination & Problem Solving/Decision Making** – 30 minutes
- **One Annual Practicum** – 30 minutes
- **Two Rotational Practicum** – 30 minutes each

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 ten 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 PRACTICUMS (100 POINTS)

Each participant will complete one annual practicum:

1. Job interview
2. Growing procedures

JOB INTERVIEW (100 POINTS)

Each participant will appear before an employer (judge) for the purpose of interviewing for a position available in the employer's business. The event coordinator will announce specific information about the job for which the participant is applying at least 1 month prior to the event. Participants will be given two job descriptions at the event along with application forms to complete. Participants will be allowed to choose the job they wish to interview for and prepare their applications prior to participating in the practicum. Participants will be expected to prepare, prior to the event, a résumé of their experiences and background to present to the judge at the time of the interview. Ten minutes will be allowed for this practicum. Participants will be allowed five minutes to complete the interview and five minutes for judges to score the interview. Scoring criteria are presented on the job interview practicum scorecard which will be recorded by a judge.

GROWING PROCEDURES (100 POINTS)

One or more of the three growing procedures listed below will be evaluated. Students will not demonstrate these procedures, but instead will review pictures and other supporting resources to answer a series of multiple choice questions. Thirty minutes will be allowed for this section.

- **Potting of Young Plants (Plugs or Liners)**
- **Asexual Propagation of Plants**
- **Pinching Plants**

ROTATIONAL PRACTICUMS (75 POINTS)

In addition to the one annual practicum, two rotational practicums 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 two practicums will be conducted on the day of the event.

1. Selling One-On-One
2. Media Selling
3. Make a Mixed Planter Combination
4. Make and Package a Corsage
5. Identifying and Controlling Plant Disorders
6. Handling a Hazardous Situation

SELLING ONE-ON-ONE (75 POINTS)

Each participant will assume the role of a sales person 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/her need 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 ten minutes, participants will be allowed five minutes for dialogue with the customer and completion of the sales form. Judges will be allowed five minutes to score the participant. Scoring criteria are presented on the selling one-on-one practicum scorecard which will be recorded by a judge.

MEDIA SELLING (75 POINTS)

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

- 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. Thirty minutes will be allowed for this practicum. Scoring criteria are presented on the media selling practicum which will be recorded by a judge.

MAKE A MIXED PLANTER COMBINATION (75 POINTS)

Each participant will make a $35 mixed planter combination. All plant materials, growing media and containers will be provided. Thirty minutes will be allowed for each participant to make their mixed planter combination 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 planter combination. The markup is built into the retail price. Scoring criteria are presented on the making a mixed planter combination practicum scorecard which will be recorded by a judge.

MAKE AND PACKAGE A CORSAGE (75 POINTS)

Each participant will make and package a $25 corsage. The type of corsage and information about the corsage will be announced by the event assistant in charge at the beginning of the practicum. All plant and non-plant materials needed to construct and package the corsage will be provided. 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 making and packing a corsage scorecard 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 then must 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 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

HANDLING A HAZARDOUS SITUATION (75 POINTS)

Each participant will be presented with a hazardous situation that could develop in a floriculture business. The participant will answer a series of questions relating to how they would resolve the problem. Thirty minutes will be allowed for this practicum. Scoring criteria are presented on the hazardous situation scorecard which will be recorded by a judge.

TIEBREAKERS

If ties occur, the following events will be used in 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

Scoring

Total Possible Individual Points: 700 points
Total Points per Team: 2,800 points
(1680 team points are needed to advance to Nationals)

- **Identification of Plant Material and Equipment** – 200 points
- **Written Exam & Problem Solving/Decision Making** – 250 points
- **Annual Practicum** – 100 points
- **Rotational Practicum #1** – 75 points
- **Rotational Practicum #2** – 75 points

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 and the New Jersey FFA Association.

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 Core Catalog—Past CDE Q&A's *(http://shop.FFA.org/cde-qas-c1413.aspx)*
- Principal of Floral Design, Pat Diehl Scace, James M. DelPrince – Goodheart Wilcox Publisher 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, Inter- state Publishers, Inc.
- Introductory Horticulture – Carroll Shry, Edward Reiley – Eight Edition
- Greenhouse Operation and Management – Paul V. Nelson – Seventh Ediition (Specific Reference for the disorders rotational practicum)
- Ball Publishing: Ball Redbook, Volume 1&2, 18th Edition

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Floriculture Plant Identification List

101	Aechmea fasciata cv.	*Silver Vase Bromeliad*
102	Ageratum houstonianum	*Ageratum*
103	Alstroemeria hybrid cv.	*Peruvian Lily*
104	Anemone coronaria	*Anemone*
105	Anethum graveolens cv.	*Dill*
106	Angelonia hybrid cv.	*Angelonia*
107	Anthurium x andraeanum cv.	*Flamingo Plant*
108	Antirrhinum majus cv.	*Snapdragon*
109	Aphelandra squarrosa cv.	*Zebra Plant*
110	Araucaria heterophylla	*Norfolk Island Pine*
111	Asparagus densiflorus	*Sprengeri Fern*
112	Aster pringlei	*Monte Cassino Aster*
113	Astilbe hybrid cv.	*Astilbe*
114	Begonia x semperflorens –cultorum	*Wax Begonia*
115	Begonia x tuberhybrida cv.	*Tuberous Begonia*
116	Caladium x hortulanum cv.	*Caladium*
117	Calibrachoa hybrid cv.	*Million Bells*
118	Callistephus chinensis cv.	*China Aster*
119	Campanula hybrid cv.	*Campanula*
120	Canna x generalis cv.	*Garden Canna*
121	Capsicum annuum	*Ornamental Pepper Plant*
122	Catharanthus roseus	*Periwinkle*
123	Celosia argentea cv.	*Cockscomb*
124	Chamaedorea elegans	*Parlor Palm*
125	Chamelaucium uncinatum	*Waxflower*
126	Cholorophytum comosum cv.	*Spider Plant*
127	Chrysanthemum x morifolium	*Florist's Chrysanthemum*
128	Clematis hybrid cv.	*Clematis*
129	Codiaeum variegatum pictum	*Croton*
130	Crassula argentea	*Jade Plant*
131	Cycas revoluta cv.	*Sago Palm*
132	Cyclamen x persicum cv.	*Florist's Cyclamen*
133	Cymbidium cv.	*Cymbidium Orchid*
134	Cymbopogon cv.	*Lemongrass (herb)*
135	Dahlia hybrid cv.	*Dahlia*
136	Delphinium consolida cv.	*Larkspur*
137	Dendrobium cv.	*Dendrobium Orchid*
138	Dianthus caryophyllus cv.	*Carnation*
139	Dracaena cincta	*Red Edge Dracaena*
140	Echinocactus cv.	*Barrel Cactus*
141	Epipremnum aureum cv.	*Golden Pothos*
142	Erica carnea cv.	*Spring Heather*
143	Eucalyptus polyanthemos	*Silver Dollar Eucalyptus*
144	Euphorbia pulcherrima cv.	*Poinsettia*
145	Eustoma grandiflorum	*Lisianthus*
146	Exacum affine	*Persian Violet*
147	Ficus benjamina cv	*Benjamin Fig*
148	Ficus elastica cv	*Rubber Plant*
149	Fragaria x ananassa cv.	*Strawberry Plant*
150	Freesia x hybrida	*Freesia*
151	Gardenia jasminoides	*Gardenia*
152	Gerbera jamesonii	*Gerbera Daisy*
153	Gladiolus x hortulanus cv.	*Garden Gladiolus*
154	Gomphrena hybrid cv.	*Globe Amaranths*
155	Gypsophila elegans cv.	*Baby's Breath*
156	Hedera helix cv.	*English Ivy*
157	Helianthus annuus	*Sunflower*
158	Hemerocallis cv.	*Daylily*
159	Hippeastrum hybrid cv.	*Amaryllis*
160	Hosta cv.	*Hosta*
161	Hoya carnosa	*Wax Plant*
162	Hyacinthus orientalis cv.	*Hyacinth*
163	Hydrangea macrophylla	*Big Leaf Hydrangea*
164	Impatiens hybrid cv.	*Impatiens*
165	Impomoea batatas cv.	*Ornamental Sweet Potato*
166	Iris x xiphium cv.	*Dutch Iris*
167	Senecio cineraria	*Dusty Miller*
168	Justica brandegeana	*Shrimp Plant*
169	Kalanchoe x blossfeldiana cv.	*Kalanchoe*
170	Leucanthemum x superbum	*Shasta Daisy*

171	Leucospermum hybrid cv.	*Pin Cushion Protea*
172	Liatris spicata	*Liatris*
173	Lilium hybrid cv.	*Asiatic or Oriental Lily*
174	Limonium sinuatum	*Statice*
175	Lobularia maritima	*Alyssum*
176	Maranta leuconeura	*Prayer Plant*
177	Matthiola incana cv.	*Stock*
178	Monstera deliciosa	*Split Leaf Philodendron*
179	Narcissus hybrid cv.	*Daffodil or Narcissus*
180	Nephrolepis exaltata cv.	*Boston Fern*
181	Ocimum basilicum cv.	*Basil*
182	Opuntia cv.	*Cactus*
183	Paeonia cv.	*Peony*
184	Paphiopedilum hybrid cv.	*Ladyslipper Orchid*
185	Pelargonium x hortorum cv.	*Zonal Geranium*
186	Pelargonium peltatum cv.	*Ivy Geranium*
187	Pentas hybrid cv.	*Pentas*
188	Petroselinum crispum cv.	*Parsley*
189	Petunia x hybrida cv.	*Petunia*
190	Phalaenopsis cv.	*Moth Orchid*
191	Philodendron scandens oxycardium	*Heartleaf Philodendron*
192	Pilea cadierei	*Aluminum Plant*
193	Portulaca oleracea cv.	*Portulaca*
194	Primula malacoides cv.	*Primrose*
195	Ranunculus hybrid cv.	*Ranunculus*
196	Rhododendron simsii cv.	*Florist Azalea*

197	Rosa hybrid cv	*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	*Octopus Plant*
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 scutellarioides	*Coleus*
209	Spathiphyllum	*Peace Lily*
210	Stephanotis floribunda	*Stephanotis*
211	Strelitzia reginae	*Bird of Paradise*
212	Syngonium podophyllum	*Nephthytis*
213	Tagetes species cv.	*Marigold*
214	Tradescantia zebrine	*Wandering Jew*
215	Tulipa cv.	*Tulip*
216	Verbena hybrid cv.	*Verbena*
217	Vinca hydrid cv.	*Vinca*
218	Viola x wittrockiana cv.	*Pansy*
219	Zantedeschia hybrid cv.	*Calla Lily*
220	Zinnia cv.	*Zinnia*

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Floriculture equipment and supply identification list

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

335	Hearing protection
336	Glue pan
337	Glue sticks
338	Hook-and-blade pruners (bypass pruners)
339	Hose punch
340	Hose repair coupling
341	Hose-end repair fitting
342	Hose-end sprayer
343	Hose-end washer
344	Impulse sprinkler
345	Irrigation timer
346	Irrigation tape
347	Sphagetti tubing (1/4” diameter or less)
348	Nosegay holder
349	Ribbon shears
350	Sheet moss
351	Mist nozzle (mist bed)
352	Spanish moss
353	Nursery container
354	Oscillating sprinkler
355	Peat moss
356	Peat pots
357	pH testing meter
358	Fogger
359	Styrofoam
360	Surestik cling
361	Polyethylene film
362	Polyethylene pipe
363	Tulle
364	Water picks
365	Water tubes
366	Waterproof container tape
367	Propagation mat

368	Wire cutter
369	PVC (polyvinylchloride) pipe
370	Wooden pick
371	Resin-coated fertilizer
372	Respirator
373	Wrist corsage holder
374	PVC pipe cutter
375	Greenhouse thermostat
376	Safety goggles
377	Sand
378	Scoop shovel
379	Shade fabric
380	Sharpening stone
381	Siphon injector
382	Chemical resistant gloves
383	Soil moisture meter
384	Goggles
385	Solenoid valve
386	Pest strips
387	Propagation trays
388	Sphagnum moss
389	Spray suit
390	Square point (flat) shovel
391	Rockwool propagation cubes
392	Fertilizer injectors
393	Ellepot propagation cubes
394	Rice hulls
395	Pot covers
396	Rose and stem flower stripper
397	Backflow preventer
398	Vermiculite
399	Water breaker
400	Water soluble fertilizer

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Job Interview Practicum Rubric

100 points

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

		Excellent	Good	Needs Improvement	Member Score
Introduction					
• Initial presentation • Eye contact • Handshake	• Gives name • States why here	8-10 points	4-7 points	0-3 points	
Knowledge of job					

• Resume
  • Typed
  • Completeness
  • Content/Accurate
		11-15 points	6-10 points	0-5 points	

• Application
  • Legibility
  • Completed
		8-10 points	4-7 points	0-3 points	

Knowledge of the floriculture industry/job					
• Tell me about yourself • What skills do you have for this job? • What are your experiences relating to this job?	• Why should I hire you over someone else? • How would you handle a customer complaint	13-20 points	7-12 points	0-6 points	
Response to questions					
• What are your weaknesses? • Where do you see yourself in the next 5 years?	• BONUS: Would you hire this person?	11-15 points	6-10 points	0-5 points	
Personality					
• Confidence • Enthusiasm	• Appearance	11-15 points	6-10 points	0-5 points	
Poise					
• Posture • Closure (“Thank you.”)	• Asks for the job or a decision date	11-15 points	6-10 points	0-5 points	
				TOTAL SCORE: 100	

JUDGE’S NAME JUDGE’S SIGNATURE DATE

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One-on-One Practicum Rubric

75 points

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Took Initiative	9-11 points	5-8 points	0-4 points	
Communicated Effectively	9-11 points	5-8 points	0-4 points	
Exhibited ambition and efficiency	9-11 points	5-8 points	0-4 points	
Diplomatic and courteous	9-11 points	5-8 points	0-4 points	
Knew merchandise, prices and policies	9-11 points	5-8 points	0-4 points	
Accuracy of information collected	9-11 points	5-8 points	0-4 points	
Closed sale properly	7-9 points	4-6 points	0-3 points	
			TOTAL SCORE: 75	

JUDGE'S NAME JUDGE'S SIGNATURE DATE

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Floriculture Making a Mixed Combination Planter Rubric

75 points

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Selection of products	6-8 points	3-5 points	0-2 points	
Preparation of plant materials	6-7 points	3-5 points	0-2 points	
Labeling of combo	7-10 points	4-6 points	0-3 points	
Balance	9-12 points	5-8 points	0-4 points	
Design	11-15 points	6-10 points	0-5 points	
Attractiveness	10-13 points	5-9 points	0-4 points	
Pricing	7-10 points	4-6 points	0-3 points	
			TOTAL SCORE: 75	

JUDGE'S NAME JUDGE'S SIGNATURE DATE

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Mixed Combination Planter Itemized List of Costs

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

Quantity	PLANT MATERIAL	Unit Cost	Total
		TOTAL FLOWER/FOLIAGE MATERIAL COST	

Quantity	MATERIAL USED	Unit Cost	Total
		TOTAL HARD GOODS COST	
		Total Plant Material Cost	
		Total Hard Goods Cost	
		Container Cost	
		Sub Total	
		TOTAL MIXED PLANTER COST	

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Floriculture Making and Packing a Corsage Rubric

75 points

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Wiring, taping, and/or gluing	11-15 points	6-10 points	0-5 points	
Use of ribbon	7-10 points	4-6 points	0-3 points	
Design	11-15 points	6-10 points	0-3 points	
Wear-ability	7-10 points	4-6 points	0-3 points	
Packaging	4-5 points	2-3 points	0-1 points	
Pricing (accuracy of pricing identification)	7-10 points	5-8 points	0-4 points	
Pricing	7-10 points	4-6 points	0-3 points	
			TOTAL SCORE: 75	

JUDGE'S NAME JUDGE'S SIGNATURE DATE

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Corsage Itemized List of Costs

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

Quantity	FLOWER/FOLIAGE USED	Unit Cost	Total
		TOTAL FLOWER/FOLIAGE MATERIAL COST	

Quantity	MATERIAL USED	Unit Cost	Total
		TOTAL HARD GOODS COST	
		Total Plant Material Cost	
		Total Hard Goods Cost	
		TOTAL CORSAGE COST	

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Disorder Practicum Scorecard

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	
		TOTAL POINTS	75	

Disorder Practicum Continued

CLASSIFICATION:

100 Diseases
101 Insects/ Pests / Mites
102 Nutritional/ Environmental

IDENTIFICATION:

200 Aphids
201 Black Leaf Spot
202 Botrytis – Grey Mold
203 Damping-off
204 Downy Mildew
205 Ethylene Damage
206 Fungus Gnats
207 Insufficient Watering
208 Iron Deficiency
209 Leaf Miner
210 Leafhopper
211 Mealybugs
212 Nitrogen Deficiency
213 Phosphorus Deficiency
214 Powdery Mildew
215 Root Rot
216 Rust
217 Scale
218 Shore Flies
219 Snails/ Slugs
220 Spider Mites
221 Stem Rot
222 Thrips
223 Tospovirus (INSV and TSWV)
224 Whiteflies

CHEMICAL CONTROL:

400 Fungicide
401 Insecticide
402 Miticide
403 Mulluscicide
404 No Treatment Listed

CULTURAL CONTROL:

500 Apply Complete Fertilizer
501 Correct/ Adjust Temperature
502 Correct/ Adjust Watering
503 Ladybird Beetles
504 Nematodes
505 Parasitic Wasps
506 Predatory Mites
507 Reduce Relative Humidity
508 No Treatment Listed

NEW JERSEY FFA
CAREER AND LEADERSHIP
DEVELOPMENT EVENTS

Media Selling Practicum Rubric

NAME MEMBER NUMBER

CHAPTER STATE TEAM NUMBER

	Excellent	Good	Needs Improvement	Member Score
Identified and appeal to target group	9-12 points	5-8 points	0-4 points	
Informed the consumer	7-9 points	4-6 points	0-3 points	
Creativity	7-9 points	4-6 points	0-3 points	
Easy to read or view	7-9 points	4-6 points	0-3 points	
Presented one idea	7-9 points	4-6 points	0-3 points	
Contained essential information	7-9 points	4-6 points	0-3 points	
Grammar, spelling, accuracy	7-9 points	4-6 points	0-3 points	
Proper use of space and format	7-9 points	4-6 points	0-3 points	
			TOTAL SCORE: 75	

JUDGE'S NAME JUDGE'S SIGNATURE DATE

NEW JERSEY FFA
CAREER AND LEADERSHIP DEVELOPMENT EVENTS

Agriculture, Food and Natural Resources Content Standards

Measurement Assessed	Where measured in event	Academic Content Standards Addressed
ABS.01.01. Performance Indicator: Apply micro- and macroeconomic principles to plan and manage inputs and outputs in an AFNR business.		
ABS.01.01.01.b. Apply microeconomic principles to calculate values associated with different inputs and outputs in AFNR businesses (e.g., price, point of equilibrium, opportunity costs, marginal costs, etc.).	Exam, Problem Solving/Decision Making, Selling One-on-one, Floral Design, Mixed Combo Planter and Corsage	CCSS.ELA-Literacy.L.9-10.6 CCSS.ELA-LITERACY.L.11-12.6 CCSS.ELA-LITERACY.RST.9-10.4 CCSS.ELA-LITERACY.RST.11-12.4 CCSS.MATH.CONTENT.HSS.ID.C.7 CCSS.MATH.CONTENT.HSS.IC.B.6 Financial Investing: Benchmarks: Grade 12, Statement 9
ABS.04.03.02.a. Research and summarize examples that illustrate the importance of risk and uncertainty within AFNR businesses.	Selling One-on-One	Financial Investing: Benchmarks: Grade 12, Statement 11 Protecting and Insuring: Benchmarks: Grade 12, Statements 2 Protecting and Insuring: Benchmarks: Grade 12, Statements 3 Protecting and Insuring: Benchmarks: Grade 12, Statements 4
ABS.05.02.02.b. Assess different responses/customer reactions that could be presented during different types of sales calls used in AFNR businesses (e.g., competitor prices, competing products, post-sale service, complaints about product, etc.).	Selling One-on-One	CCSS.ELA-LITERACY.SL.9-10.6 CCSS.ELA-LITERACY.SL.11-12.6 CCSS.ELA-LITERACY.RH.9-10.7 CCSS.ELA-LITERACY.RH.11-12.7 Buying Goods & Services: Benchmarks: Grade 12, Statements 1 Buying Goods & Services: Benchmarks: Grade 12, Statements 3 Buying Goods & Services: Benchmarks: Grade 12, Statements 4 Buying Goods & Services: Benchmarks: Grade 12, Statements 5
ABS.05.03. Performance Indicator: Assess marketing principles and develop marketing plans to accomplish AFNR business objectives.		
ABS.05.03.02.a. Examine and categorize strategies used in marketing programs for AFNR businesses (e.g., Internet, direct to customer, social media, etc.).	Selling	CCSS.ELA-LITERACY.L.9-10.6 CCSS.ELA-LITERACY.L.11-12.6 CCSS.ELA-LITERACY.RST.9-10.4 CCSS.ELA-LITERACY.RST.11-12.4 CCSS.ELA-LITERACY.W.9-10.2 CCSS.ELA-LITERACY.W.11-12.2 CCSS.ELA-LITERACY.RH.9-10.7 CCSS.ELA-LITERACY.RH.11-12.7 CCSS.ELA-LITERACY.SL.9-10.6 CCSS.ELA-LITERACY.SL.11-12.6 Buying Goods & Services: Benchmarks: Grade 12, Statements 1 Buying Goods & Services: Benchmarks: Grade 12, Statements 3 Buying Goods & Services: Benchmarks: Grade 12, Statements 4 Buying Goods & Services: Benchmarks: Grade 12, Statements 7
BS.02.02. Performance Indicator: Implement standard operating procedures for the proper maintenance, use and sterilization of equipment in a laboratory.		
BS.02.02.03.c. Perform sterilization techniques for equipment in a	Growing Procedures (asexual propagation)	HS-ETS1-2

laboratory using standard operating procedures.		
BS.02.04. Performance Indicator: Safely manage and dispose of biological materials, chemicals and wastes according to standard operating procedures.		
BS.02.04.01.b. Assess the need for personal protective equipment and select the appropriate equipment to wear when working with biological and chemical materials.	Equipment list/Handling Hazards Situations	CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.11-12.4
BS.02.04.02.a. Classify and describe hazards associated with biological and chemical materials.	Handling Hazards Situations	CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.11-12.4
BS.02.04.03.a. Summarize what happens to waste after it leaves the laboratory and examine opportunities to reduce waste and unnecessary costs.	Handling Hazards Situations	CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.11-12.4
CS.01.01. Performance Indicator: Examine issues and trends that impact AFNR systems on local, state, national and global levels.		
CS.01.01.01.b. Analyze and document AFNR issues and their impact on local, state, national and global levels.	Problem Solving	
CS.01.01.02.b. Analyze current trends in AFNR systems and predict their impact on local, state, national and global levels.	Problem Solving	
CS.01.02. Performance Indicator: Examine technologies and analyze their impact on AFNR systems.		
CS.01.02.01.b. Apply appropriate use of technologies in AFNR workplace scenarios.	Written Exam, Growing procedures	
CS.01.02.02.b. Analyze how technology is used in AFNR systems to maximize productivity.	Written Exam, Growing procedures	
CS.02.01. Performance Indicator: Research geographic and economic data related to AFNR systems.		
CS.02.01.02.c. Devise a strategy to solve a problem in an AFNR system using a set of economic data.	Problem Solving, Team Activity-media selling	
CS.02.02. Performance Indicator: Examine the components of the AFNR systems and their impact on the local, state, national and global society and economy.		
CS.02.02.01.c. Devise a strategy for explaining components of AFNR systems to audiences with limited knowledge.	Team Activity, Written Exam	
CS.02.02.02.c. Evaluate how society traditions, customs or policies have resulted from practices with AFNR systems.	Written Exam	
CS.02.02.03.b. Assess the economic impact of an AFNR system on a local,	Written Exam, Selling one on one	

state, national and global level.		
CS.03.01. Performance Indicator: Identify required regulations to maintain and improve safety, health and environmental management systems.		
CS.03.01.01.c. Evaluate how AFNR organizations/businesses promote improved health, safety and environmental management.	Hazard materials, Plant Disorders, Written Exam	
CS.03.01.02.c. Construct and implement methods to evaluate compliance with required safety, health and environmental management regulations.	Problem Solving, Plant Disorders, Hazardous Materials, Written Exam	
CS.03.02. Performance Indicator: Develop a plan to maintain and improve health, safety and environmental compliance and performance.		
CS.03.02.01.c. Create a plan to improve safety, health and environmental management regulations in an AFNR business.	Hazardous Materials Situation	AFNR Career Cluster, Statement 6
CS.03.02.02.c. Devise a strategy to educate employees on environmental compliance and performance in an AFNR business.	Hazardous Materials Situation	AFNR Career Cluster, Statement 6
CS.03.03. Performance Indicator: Apply health and safety practices to AFNR worksites.		
CS.03.03.01.b. Analyze and summarize current health and safety practices of AFNR business.	Hazardous Materials Situation	
CS.03.03.02.c. Create a plan to communicate appropriate responses for health and safety situations within an AFNR business.	Hazardous Materials Situation	
CS.03.03.03.b. Assess first aid knowledge and procedures relevant to AFNR worksites.	Written Exam, Hazardous Materials Situation	
CS.03.03.04.c. Create a plan to mitigate the level of contamination or injury identified as a risk in the workplace.	Hazardous Materials Situation	
CS.03.04. Performance Indicator: Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.		
C3.03.04.01.c. Design plans to ensure the use of appropriate protective equipment when using various AFNR tools and equipment.	Written Exam, Hazardous Materials Situation, Plant and Tool ID	
C3.03.04.02.c. Evaluate and select appropriate tools and equipment to complete AFNR tasks.	Written Exam, Hazardous Materials Situation, Plant and Tool ID	
CS.03.04.03.b. Assess and demonstrate appropriate operation, storage and maintenance techniques	Hazardous Material Situation	

for AFNR tools and equipment.		
CS.04.01. Performance Indicator: Identify and implement practices to steward natural resources in different AFNR systems.		
CS.04.01.01.b. Analyze available practices to steward natural resources in AFNR systems (e.g., wildlife and land conservation, soil and water practices, ecosystem management, etc.).	Plant and Tool ID, Growing Procedures	AFNR Career Cluster, Statement 2 AFNR Career Cluster, Statement 3
CS.04.01.02.b. Analyze and assess sustainability practices that can be applied in AFNR systems (e.g., energy efficiency, recycle/reuse/repurpose, green resources, etc.).	Plant and Tool ID, Growing Procedures, Written Exam	AFNR Career Cluster, Statement 2 AFNR Career Cluster, Statement 3
CS.04.02. Performance Indicator: Assess the natural resource related trends, technologies and policies that impact AFNR systems.		
CS.04.02.01.b. Analyze natural resources trends and technologies and document how they impact AFNR systems (e.g., climate change, green technologies, water resources, etc.).	Written Exam	AFNR Career Cluster, Statement 7
CS.05.01. Performance Indicator: Evaluate the steps and requirements to pursue a career opportunity in each of the AFNR career pathways (e.g., goals, degrees, certifications, resumes, cover letter, portfolios, interviews, etc.).		
CS.05.01.01.c. Evaluate progress toward AFNR career goals and identify opportunities for improvement and necessary adjustments to one's plan of action	Job Interview	
CS.05.01.02.c. Implement one's personal plan of action for obtaining the required education, training and experiences and evaluate progress to identify opportunities for improvement and necessary adjustments.	Job Interview	
CS.05.01.03.c. Evaluate, update and improve a set of personal tools to reflect current skills, experiences, education, goals, etc. and complete the processes needed to pursue and obtain a career in an AFNR pathway.	Media Selling, Corsage, floral arrangement, asexual propagation, team activity, Selling one on one	
CS.05.02. Performance Indicator: Examine careers in each of the AFNR pathways.		
CS.05.02.01.c. Interpret and evaluate the results of a personal career assessment and connect them to potential careers in AFNR pathways.	Job Interview	
CS.05.02.02.c. Conduct interviews with career professionals within AFNR pathways and summarize the results.	Job interview	

CS.06.01. Performance Indicator: Explain foundational cycles and systems of AFNR.		
CS.06.01.01.c. Teach others about the impact of foundational cycles within AFNR systems.	Team Activity/Written Exam	
CRP.01.01. Performance Indicator: Model personal responsibility in the workplace and community.		
CRP.01.01.01.c. Evaluate past workplace and community situations and determine how personal responsibility positively or negatively impacted outcomes.	Team Activity	
CRP.01.01.02.c. Model personal responsibility in workplace and community situations.	Team Activity, Sales, Job Interview	
CRP.01.02 Performance Indicator: Evaluate and consider the near-term and long-term impacts of personal and professional decisions on employers and community before taking action.		
CRP.01.02.01.c. Make and defend personal decisions after analyzing their near- and long-term impacts on self and others.	Problem Solving, Job Interview	
CRP.01.02.02.c. Make and defend professional decisions after evaluating their near- and long-term impacts on employers and community.	Job Interview	
CRP.02.01. Performance Indicator: Use strategic thinking to connect and apply academic learning, knowledge and skills to solve problems in the workplace and community.		
CRP.02.01.01.c. Apply academic knowledge and skills to solve problems in the workplace and reflect upon the results achieved. Problem Solving, Team Activity, Hazardous Situation, Plant Disorder,	Media Selling	
CRP.02.01.02.c. Apply academic knowledge and skills to solve problems in the community and reflect upon results achieved.	Media Selling	
CRP.02.02. Performance Indicator: Use strategic thinking to connect and apply technical concepts to solve problems in the workplace and community.		
CRP.02.02.01.b. Assess workplace problems and distinguish the most appropriate technical concepts to apply.	Problem Solving, Plant Disorders	
CRP.03.01. Performance Indicator: Design and implement a personal wellness plan.		
CRP.03.01.02.b. Analyze the relationship between personal wellness and workplace performance.	Job Interview, Floral Design	

CRP.03.02. Performance Indicator: Design and implement a personal financial management plan.		
CRP.03.02.01.a. Research and examine components in a personal financial management plan (e.g., income, expense, budgeting, savings, credit, etc.).	Corsage, Floral Arrangement, Asexual Propagation	
CRP.03.02.02.a. Examine and categorize personal financial practices (e.g., earning, spending, use of management tools, credit, etc.).	Corsage, Floral Arrangement, Asexual Propagation	
CRP.04.01. Performance Indicator: Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.		
CRP.04.01.01.c. Evaluate other's verbal and non-verbal communications (e.g., speeches, presentations, oral reports, etc.) and propose recommendations for improvement in clarity, logic, purpose and professionalism.	Job Interview, Team Activity, One on One Selling, Growing Procedure	
CRP.04.01.02.c. Evaluate personal strengths and areas for growth with regard to speaking formally and informally with clarity, logic, purpose and professionalism, and identify ways to improve.	Job Interview, Team Activity, One on One Selling, Growing Procedure	
CRP.04.02. Performance Indicator: Produce clear, reasoned and coherent written communication in formal and informal settings.		
CRP.04.02.01.c. Evaluate the effectiveness of different forms of written communication for achieving their intended purpose.	Job Interview/Media Selling	
CRP.04.02.02.c. Compose clear and coherent written documents (e.g., agendas, audio-visuals, drafts, forms, etc.) for formal and informal settings.	Job Interview/Media Selling	
CRP.04.03. Performance Indicator: Model active listening strategies when interacting with others in formal and informal settings.		
CRP.04.03.01.c. Evaluate personal effectiveness and devise a plan to improve active listening skills.	One on one selling	
CRP.04.03.02.c. Model active listening strategies in formal and informal settings.	One on one selling, Job Interview	
CRP.05.01. Performance Indicator: Assess, identify and synthesize the information and resources needed to make decisions that positively impact the workplace and community.		
CRP.05.01.01.c. Evaluate workplace and community decision-making processes and devise strategies for improvement.	Team Activity	

CRP.05.01.02.c. Evaluate workplace and community situations and recommend the information and resources needed to support good decisions.	Team Activity	
CRP.05.01.03.c. Synthesize information and resources and apply to workplace and community situations to make positive decisions.	Team Activity	
CRP.05.02. Performance Indicator: Make, defend and evaluate decisions at work and in the community using information about the potential environmental, social and economic impacts.		
CRP.05.02.01.c. Evaluate and defend decisions applied in the workplace and community situations.	Team Activity	
CRP.05.02.02.c. Evaluate workplace and community situations and propose decisions to be made based upon the positive impact made on environment, social and economic areas.	Team Activity	
CRP.06.01. Performance Indicator: Synthesize information, knowledge and experience to generate original ideas and challenge assumptions in the workplace and community.		
CRP.06.01.01.b. Synthesize information, knowledge and experiences to generate ideas for workplace and community situations.	Team Activity	
CRP.06.02. Performance Indicator: Assess a variety of workplace and community situations to identify ways to add value and improve the efficiency of processes and procedures.		
CRP.06.02.02.b. Predict and communicate potential gains in efficiency and value-added from implementing an improved process or procedure.	Team Activity	
CRP.06.03. Performance Indicator: Create and execute a plan of action to act upon new ideas and introduce innovations to workplace and community organizations.		
CRP.06.03.02.b. Elicit and assimilate input and feedback from individuals and organizations about new ideas or innovations for the workplace or community.	Team Activity	
CRP.07.01. Performance Indicator: Select and implement reliable research processes and methods to generate data for decision-making in the workplace and community.		
CRP.07.01.01.c. Evaluate business' and organizations' use of research methods and processes and propose recommendations for improvement.	Plant Disorders	
CRP.07.01.02.b. Assess the positives and negatives of using different research strategies and methods to	Plant Disorders	

generate data for workplace and community decisions.		
CRP.07.02. Performance Indicator: Evaluate the validity of sources and data used when considering the adoption of new technologies, practices and ideas in the workplace and community.		
CRP.07.02.02.b. Assimilate data to assist in making a decision about the adoption of a new technology, practice or idea by workplaces and community organizations.	Plant Disorders	
CRP.08.01. Performance Indicator: Apply reason and logic to evaluate workplace and community situations from multiple perspectives.		
CRP.08.01.01.c. Evaluate how applying critical thinking skills can impact workplace and community situations.	Problem Solving/Team Activity	
CRP.08.01.02.b. Assess solutions to workplace and community problems for evidence of reason, logic and consideration of multiple perspectives.	Job Interview, Plant Disorders	
CRP.08.02. Performance Indicator: Investigate, prioritize and select solutions to solve problems in the workplace and community.		
CRP.08.02.01.c. Devise strategies to evaluate the effectiveness of solutions for resolving workplace and community problems.	Problem Solving, Team Activity	
CRP.08.02.02.c. Evaluate and select solutions with greatest potential for success to solve workplace and community problems.	Problem Solving, Team Activity	
CRP.08.03. Performance Indicator: Establish plans to solve workplace and community problems and execute them with resiliency.		
CRP.08.03.01.c. Evaluate the effectiveness of different problem-solving models for reaching a solution to workplace and community issues.	Hazardous Situation, Problem Solving	
CRP.08.03.02.c. Implement and evaluate plans to solve workplace and community problems.	Hazardous Situation, Problem Solving	
CRP.09.01. Performance Indicator: Model characteristics of ethical and effective leaders in the workplace and community (e.g. integrity, self-awareness, self-regulation, etc.).		
CRP.09.01.01.c. Evaluate ethical and effective leadership characteristics demonstrated by others.	Job Interview, Team Activity	
CRP.09.02.01.c. Evaluate opportunities to apply personal management skills into daily tasks and responsibilities.	Team Activity	
CRP.09.02.02.c. Model personal management skills and identify	Team Activity	

opportunities for continuous improvement.		
CRP.09.03. Performance Indicator: Demonstrate behaviors that contribute to a positive morale and culture in the workplace and community (e.g., positively influencing others, effectively communicating, etc.).		
CRP.09.03.01.b. Analyze the relationship between demonstrating respectful and purposeful behaviors (e.g., collaborative, clear expectations, etc.) and increased influence in the workplace and community.	Team Activity	
CRP.09.03.02.b. Devise strategies for continuation and improvement of respectful and purposeful behaviors that contribute to positive morale and culture in workplace and community (e.g., recognize others' skills, promote collaboration, etc.).	Team Activity	
CRP.10.01. Performance Indicator: Identify career opportunities within a career cluster that match personal interests, talents, goals and preferences.		
CRP.10.01.01.c. Plan a career path based on personal interests, goals, talents and preferences.	Job Interview	
CRP.10.01.02.c. Match potential career opportunities in career clusters with personal interests, talents, goals and preferences.	Job Interview	
CRP.10.02. Performance Indicator: Examine career advancement requirements (e.g., education, certification, training, etc.) and create goals for continuous growth in a chosen career.		
CRP.10.02.01.c. Devise and implement plans to complete the requirements for career advancement.	Job Interview	
CRP.10.02.02.b. Create goals for personal improvement and continuous growth in a career area.	Job Interview	
CRP.10.03. Performance Indicator: Assimilate input and/or advice from experts (e.g., counselors, mentors, etc.) to plan career and personal goals in a chosen career area.		
CRP.10.03.01.b. Assess career and personal goals and determine additional information career area experts could provide.	Job Interview	
CRP.10.04. Performance Indicator: Identify, prepare, update and improve the tools and skills necessary to pursue a chosen career path.		
CRP.10.04.01.c. Select and use appropriate tools to pursue career advancement opportunities and assimilate feedback from the process to identify improvements for the future.	Entire Event	

CRP.10.04.02.c. Apply skills to complete common processes involved in pursuing a career and assimilate input and feedback from experts (e.g., mentors, teachers, business persons, etc.) to improve.	Entire Event	
CRP.11.01. Performance Indicator: Research, select and use new technologies, tools and applications to maximize productivity in the workplace and community.		
CRP.11.01.01.b. Analyze advantages and disadvantages of new technologies, tools and applications to maximize productivity in the workplace and community.	Plant Disorders, Written Exam	
CRP.11.01.02.b. Select, apply and use new technologies, tools and applications in workplace and community situations to maximize productivity.	Plant Disorders, Written Exam	
CRP.12.01. Performance Indicator: Contribute to team-oriented projects and builds consensus to accomplish results using cultural global competence in the workplace and community.		
CRP.12.01.01.c. Evaluate the effectiveness of team-oriented projects at work and in the community and make recommendations for future improvements.	Team Activity	
CRP.12.01.02.c. Devise and implement methods to obtain feedback from team members on their experiences after completing workplace and community projects.	Team Activity	
CRP.12.01.03.c. Evaluate personal level of cultural and global competence and implement plans for growth and improvement in workplace and community situations.	Team Activity	
CRP.12.02. Performance Indicator: Create and implement strategies to engage team members to work toward team and organizational goals in a variety of workplace and community situations (e.g., meetings, presentations, etc.).		
CRP.12.02.01.c. Create novel strategies to engage team members based on the situation.	Team Activity	
CRP.12.02.02.c. Evaluate the effectiveness of strategies to engage team members in a variety of workplace and community situations.	Team Activity	
ESS.01.01. Performance Indicator: Analyze and interpret laboratory and field samples in environmental service systems.		
ESS.01.01.01.c. Collect and prepare sample measurements using appropriate data collection	Growing Process and Asexual Propagation	CCSS.ELA-LITERACY.SL.11-12.5 CCSS.ELA-LITERACY.RST.11-12.9 CCSS.MATH.CONTENT.HSN.Q.A.1

techniques.		CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3 CCSS.MATH.CONTENT.HSS.ID.A.2 CCSS.MATH.CONTENT.HSS.ID.B.5 HS-ESS2-2
ESS.01.02. Performance Indicator: Properly utilize scientific instruments in environmental monitoring situations (e.g., laboratory equipment, environmental monitoring instruments, etc.).		
ESS.01.02.02.a. Identify basic environmental monitoring instruments and explain their uses.	Equipment ID	
ESS.04.01. Performance Indicator: Use pollution control measures to maintain a safe facility and environment.		
ESS.04.01.03.c. Construct a plan for handling hazardous waste in given situations.	Handling Hazardous Situations	HS-ETS1-2
NRS.01.02. Performance Indicator: Classify different types of natural resources in order to enable protection, conservation, enhancement and management in a particular geographical region.		
NRS.01.02.02.b. Apply identification techniques to determine the species of an herbaceous plant.	Plant Identification	AFNR Career Cluster – Natural Resources Systems Pathway, Statement 3 CCSS.ELA-LITERACY.RST.11-12.1 CCSS.ELA-LITERACY.RST.11-12.7 CCSS.ELA-LITERACY.RST.11-12.8 CCSS.ELA-LITERACY.WHST.9-10.2 CCSS.ELA-LITERACY.WHST.11-12.2 CCSS.ELA-LITERACY.WHST.9-10.7 CCSS.ELA-LITERACY.WHST.11-12.7 CCSS.ELA-LITERACY.WHST.9-10.9 CCSS.ELA-LITERACY.WHST.11-12.9 CCSS.MATH.CONTENT.HSN-Q.A.1 CCSS.MATH.CONTENT.HSN-Q.A.2 HS-ESS3-2
NRS.01.02.03.b. Apply identification techniques to determine the species of wildlife or insect.	Identifying and controlling Plant Disorders	AFNR Career Cluster – Natural Resources Systems Pathway, Statement 3 CCSS.ELA-LITERACY.RST.11-12.1 CCSS.ELA-LITERACY.RST.11-12.7 CCSS.ELA-LITERACY.RST.11-12.8 CCSS.ELA-LITERACY.WHST.9-10.2 CCSS.ELA-LITERACY.WHST.11-12.2 CCSS.ELA-LITERACY.WHST.9-10.7 CCSS.ELA-LITERACY.WHST.11-12.7 CCSS.ELA-LITERACY.WHST.9-10.9 CCSS.ELA-LITERACY.WHST.11-12.9 CCSS.MATH.CONTENT.HSN-Q.A.1 CCSS.MATH.CONTENT.HSN-Q.A.2 HS-ESS3-2
NRS.01.02.05.a. Research and examine the characteristics used to identify non-living resources (e.g., soil types, climate, geography, etc.).	Equipment Identification	AFNR Career Cluster – Natural Resources Systems Pathway, Statement 3 CCSS.ELA-LITERACY.RST.11-12.1 CCSS.ELA-LITERACY.RST.11-12.7 CCSS.ELA-LITERACY.RST.11-12.8 CCSS.ELA-LITERACY.WHST.9-10.2 CCSS.ELA-LITERACY.WHST.11-12.2 CCSS.ELA-LITERACY.WHST.9-10.7 CCSS.ELA-LITERACY.WHST.11-12.7

		CCSS.ELA-LITERACY.WHST.9-10.9 CCSS.ELA-LITERACY.WHST.11-12.9 CCSS.MATH.CONTENT.HSN-Q.A.1 CCSS.MATH.CONTENT.HSN-Q.A.2 HS-ESS3-2
NRS.04.02. Performance Indicator: Diagnose plant and wildlife diseases and follow protocols to prevent their spread.		
NRS.04.02.01.b. Analyze a plant disease based on its symptoms, identify if the disease needs to be reported to authorities and determine which authorities it should be reported to.	Identifying and Controlling Plant and Disorders	CCSS.ELA-LITERACY.RST.11-12.7 CCSS.ELA-LITERACY.RST.11-12.8 CCSS.ELA-LITERACY.WHST.11-12.2 CCSS.ELA-LITERACY.WHST.11-12.7 CCSS.ELA-LITERACY.WHST.11-12.8 CCSS.ELA-LITERACY.WHST.11-12.9 CCSS.MATH.CONTENT.HSN-Q.A.1 CCSS.MATH.CONTENT.HSN-Q.A.2 CCSS.MATH.CONTENT.HSN-Q.A.3 HS-LS2-7
PS.01.01. Performance Indicator: Determine the influence of environmental factors on plant growth.		
PS.01.01.01.c. Analyze plant responses to varied light color, intensity and duration and recommend modifications to light for desired plant growth.	Plant Disorder	
PS.01.01.02.c. Design, implement and evaluate a plan to maintain optimal air and temperature conditions for plant growth.	Exam – Growing Practicum – Disorder	
PS.01.01.03.c. Analyze plant responses to water conditions and recommend modifications to water for desired plant growth.	Exam – Growing Practicum – Disorder	
PS.01.02. Performance Indicator: Prepare and manage growing media for use in plant systems.		
PS.01.02.01.c. Formulate and prepare growing media for specific plants or crops.	Exam, Growing, Mixed Combo	
PS.01.02.02.c. Determine the hydraulic conductivity for soil and how the results influence irrigation practices.	Exam and Growing	
PS.01.03. Performance Indicator: Develop and implement a fertilization plan for specific plants or crops.		
PS.01.03.01.c. Monitor plants for signs of nutrient deficiencies and prepare a scouting report to correct elements negatively affecting plant growth in a field or greenhouse.	Exam, Disorder and Growing	CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
PS.01.03.02.c. Adjust the pH of growing media for specific plants or crops.	Exam and Disorder	CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
PS.01.03.03.c. Prescribe fertilizer applications based on the results of a laboratory analysis of soil and plant	Exam, Disorder and Problem Solving	CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3

tissue samples.		
PS.01.03.05.b. Assess production methods for their short- and long-term effects on soil.	Exam and Disorder	CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
PS.01.03.06.c. Devise a plan to meet plant nutrient needs based on environmental factors present.	Disorders and Exam	CCSS.MATH.CONTENT.HSN.Q.A.2 CCSS.MATH.CONTENT.HSN.Q.A.3
PS.02.01. Performance Indicator: Classify plants according to taxonomic systems.		
PS.02.01.02.c. Identify and describe important plants to agricultural and ornamental plant systems by scientific names.	ID and Exam	
PS.02.02. Performance Indicator: Apply knowledge of plant anatomy and the functions of plant structures to activities associated with plant systems.		
PS.02.02.01.b. Compare and contrast mitosis and meiosis.	Exam	HS-LS1-4
PS.02.02.03.c. Evaluate the function of the xylem, phloem and cambium tissues and the impact on plant systems.	Exam	HS-LS1-4
PS.02.02.04.c. Devise a plan for plant management practices that takes into account leaf structure and functions.	Team activity and Crop Schedule	HS-LS1-4
PS.02.02.05.c. Evaluate flower structures and analyze the impact of plant structure on plant breeding, production and use.	Exam	HS-LS1-4
PS.02.02.06.b. Analyze and categorize the major types of seeds and fruit.	Exam	HS-LS1-4
PS.02.03. Performance Indicator: Apply knowledge of plant physiology and energy conversion to plant systems.		
PS.02.03.01.c. Evaluate the impact of photosynthesis and the factors that affect it on plant management, culture and production problems.	Disorders, Team activity/Crop Schedule, Problem Solving and Exam	HS-LS1-5
PS.02.03.02.c. Evaluate the impact of plant respiration on plant growth, crop management and post-harvest handling decisions.	Floral Arrangement, Team activity Exam and Problem Solving	HS-LS1-5
PS.03.01. Performance Indicator: Demonstrate plant propagation techniques in plant system activities.		
PS.03.01.01.b. Examine and describe the process of plant pollination and/or fertilization.	Exam	
PS.03.01.03.c. Evaluate asexual propagation practices based on productivity and efficiency.	Growing Procedure	

PS.03.02. Performance Indicator: Develop and implement a management plan for plant production.		
PS.03.02.01.b. Inspect propagation material for evidence of pests or disease.	Disorders, Growing Procedure	CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.9-10.8 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.WHST.9-10.2 CCSS.ELA-Literacy.WHST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.9
PS.03.02.02.b. Prepare soil and growing media for planting with the addition of amendments.	Growing Procedure, Team activity	CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.9-10.8 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.WHST.9-10.2 CCSS.ELA-Literacy.WHST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.9
PS.03.02.05.c. Prepare plant production schedules utilizing plant growth knowledge to get plants to their optimal growth stage at a given time.	Team activity	CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.9-10.8 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.WHST.9-10.2 CCSS.ELA-Literacy.WHST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.9
Ps.03.02.06.b. Compare and contrast the types of technologies used for controlled atmosphere production.	Exam, Equipment ID	CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.9-10.8 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.WHST.9-10.2 CCSS.ELA-Literacy.WHST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.9
PS.03.02.07.b. Compare and contrast the types of systems used in hydroponic and aquaponic plant production.	Exam, Equipment ID	CCSS.ELA-Literacy.RI.9-10.1 CCSS.ELA-Literacy.RI.9-10.8 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.WHST.9-10.2 CCSS.ELA-Literacy.WHST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.9
PS.03.03. Performance Indicator: Develop and implement a plan for integrated pest management for plant production.		
PS.03.03.01.c. Devise solutions for plant pests, diseases and disorders.	Exam and Disorders	
PS.03.03.02.b. Predict pest and disease problems based on environmental conditions and life cycles.	Exam, Disorders and Problem Solving	
PS.03.03.04.b. Examine and apply procedures for the safe handling, use and storage of pesticides including personal protective equipment and reentry interval.	Handling Hazardous Situations	
PS.03.05. Performance Indicator: Harvest, handle and store crops according to current industry standards.		
PS.03.05.01.b. Assess the stage of growth to determine crop maturity or marketability and demonstrate proper harvesting techniques.	Mixed Combo	CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.2a
PS.03.05.03.b. Research and analyze practices used to maintain a safe product through harvest, processing,	Team activity and Handling Hazardous Situations	CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.2a

storage and shipment (e.g., Food Safety Modernization Act, Good Agricultural Practices, etc.).		
PS.03.05.04.b. Analyze the proper conditions required to maintain the quality of plants and plant products held in storage and during shipping.	Team activity	CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.2a
PS.03.05.05.b. Demonstrate techniques for grading, handling and packaging plants and plant products for distribution.	Team activity	CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.WHST.9-10.2a
PS.04.01. Performance Indicator: Evaluating, identifying and preparing plants to enhance an environment.		
PS.04.01.01.c. Implement a design that uses the proper plants based on the situation and environment.	Mixed Combo, Floral Arrangement, Team activity, Growing Procedure, Corsage	
PS.04.01.02.c. Evaluate a design and provide feedback and suggestions for improvement (e.g., a floral arrangement, a landscape or a landscape plan, etc.).	Mixed Combo, Floral Arrangement, Team activity and Corsage	
PS.04.02. Performance Indicator: Create designs using plants.		
PS.04.02.01.c. Analyze designs to identify use of design principles and elements.	Mixed Combo, Floral Arrangement, TA, Growing Procedure, Corsage	AFNR Career Cluster – Natural Resources Systems Pathway, Statement 3 AFNR Career Cluster – Plant Systems Pathway, Statement 2 STEM Career Cluster, Statement 4
PS.04.02.02.c. Evaluate the proper use of design tools in creating designs.	Mixed Combo, Floral Arrangement, TA, Growing Procedure, Corsage	AFNR Career Cluster – Natural Resources Systems Pathway, Statement 3 AFNR Career Cluster – Plant Systems Pathway, Statement 2 STEM Career Cluster, Statement 4