

North Carolina Agricultural Education



Horticulture I - Course Proficiency Evaluation

Example Activities Guide

Note: Course instructors are to determine student proficiency in this course by evaluating individual student performance on selected objectives by utilizing example activities included in this document or through a variety of other formative and summative assessments created locally.

The following examples have been compiled to provide a sample of possible evaluation activities, to determine if a student has “Met” or “Not Met” the criteria for each objective. These examples are not an exhaustive list and are not to be considered the only available options to determine proficiency.

1. CREDENTIAL / CERTIFICATION

- Successfully earn the NCDPI approved credential or certification for the Horticulture I course. (NC Private Pesticide Applicator)
 - Completion of NC Private Pesticide Applicator certification.
 - Private Pesticide Applicators: Farmers, or their employees, who use restricted use pesticides in the production of an agricultural commodity, on land that they own or lease, are certified as Private Pesticide Applicators upon passing the North Carolina Private Pesticide Applicator exam and submitting in the appropriate application and fee.
 - For certification information visit:
<http://www.ncagr.gov/SPCAP/pesticides/license.htm>

2. PUBLIC SPEAKING (ES 1.00)

- a. Communicate thoughts, ideas, and action plans with clarity, when using written, verbal, and/or visual methods.
 - Compose and deliver a presentation on a topic related to this course.
 - Critique and evaluate a speech, FFA Creed, or other presentation by CDE finalists from the National FFA Convention archives using the appropriate rubric.
 - Create an infographic display to be exhibited at school on a horticultural topic.

- b. Interact with others by being an active listener and by speaking clearly and with purpose.
 - Complete a work shift at the school plant sale.
 - Participate in mock business meeting using parliamentary procedure.
 - Actively participate in a class discussion/debate on an agricultural topic.

- c. Appropriately consider the audience when planning for a presentation and prepare accordingly to ensure the desired outcome.
 - Compose and deliver a presentation on a topic related to this course.
 - Create a lesson plan on animal agriculture to be presented to elementary school students or an exceptional student class.

Prepared Public Presentation Assignment

Student Instructions:

- Students will research, compose and deliver a 4-6 minute presentation on an agricultural topic. Each presentation must be the result of the student's own efforts.
- Manuscripts should be double-spaced and typewritten. The manuscript should have a bibliography for citing references. The bibliography should follow APA style.
- Facts and data may be obtained from any reputable source.
- Time Limit- Each presentation shall be a minimum of four minutes in length and a maximum of six minutes. At the conclusion, there will be a question/answer session that does not include the 6-minute time frame.

Assignment: Use the following format to create a presentation outline and use the information below to help guide you on what needs to be included.

I. Introduction

a. Introduce your presentation with a hook, such as a story or facts/figures that will lead the audience into your topic.

b. Preview Statement: This is the equivalent of the thesis statement that you write for a regular English paper. Ex: "Today I'm going to help you discover the world of forestry by first explaining how timber is harvested, and then we'll look at ... The preview statement overviews the three main topic ideas of your presentation.

II. Body: This is the "meat and potatoes" of your presentation. In your outline give pieces of information that you would include in each main point.

III. Conclusion

a. Review Statement: This is simply the reverse of your Preview Statement. Ex: Today we looked at the world of forestry by first...

b. Closing Remarks

Prepared Public Presentation Assignment – Grading Rubric

Indicators	Very strong evidence skill is present	Moderate evidence skill is present	Strong evidence skill is not present	Points Earned
Possible Points	5-4	3-2	1-0	
A. Supporting Evidence	Examples (stories, statistics, etc.) are vivid, precise, and clearly explained.	Examples are usually concrete, sometimes needs clarification.	Examples are sometimes confusing, leaving the listeners with questions.	
B. Persuasive use of evidence	Exemplary use of evidence to persuade listeners.	Sufficient use of evidence to persuade listeners.	Has difficulty using evidence to persuade listeners.	
C. Pace	Speaks very articulately at rate that engages audience.	Speaks articulately but occasionally speaks too fast or has long unnecessary hesitations.	Speaks too fast or too slow to engage audience.	
D. Command of Audience	Speaker uses appropriate emphasis and tone to captivate the audience.	Speaker presents speech as mere repeating of facts and speech comes across as a report.	Speaker lacks enthusiasm and power to engage the audience	
E. Eye Contact	Constantly looks at the entire audience (90 - 100% of the time).	Mostly looks around the audience (60 – 80% of the time).	Occasionally looks at someone or some groups (less than 50% of the time).	
F. Mannerisms and gestures	No nervous habits are displayed. Hand motions are expressive and used to emphasize talking points.	Sometimes exhibits nervous habits. Hands are sometimes used to express or emphasize.	Displays some nervous habits. Hands are not used to emphasize talking points; hand motions are sometimes distracting.	
G. Poise	Portrays confidence and composure through appropriate body language (stance, posture, facial expressions)	Maintains control most of the time, rarely loses composure.	Lacks confidence and composure.	
TOTAL SCORE:				

Student Name: _____

Class/Period: _____

Parliamentary Procedure Mock Business Meeting Assignment

Objectives:

- Discuss parliamentary procedure guidelines.
- Demonstrate knowledge of parliamentary procedure abilities.
- Collaborate to develop a script that outlines a business meeting.

Instructions:

1. The teacher will divide the class into groups of 6-7 students. Every student in the group will select an “officer” position. Please remember the president will be presiding over the meeting and help lead your group through a mock parliamentary procedure business meeting. Each group will practice and present the FFA opening and closing ceremony as a part of their business meeting. You do not need to memorize the officer parts!

2. As an “officer team,” you will work to create a flow chart script that includes the following abilities:

Main Motion, Amend, Refer to Committee, Point of Order, Division of House, Previous Question, and Adjourn

– The president can use the script during the mock business meeting, but members must participate from memory.

3. Grading Rubric:

– To complete the assignment students must work together to create the script and PRACTICE it prior to the presentation date.

– The student “president” is scored based on their ability to lead the officer team through the meeting following parliamentary procedure rules.

– Each student receives an individual grade based on the following rubric:

1. 25 points for opening and closing ceremony.
2. 25 points for one “primary” motion. (Main, Refer to Committee, Amend)
3. 25 points for one “accessory” motion. (Division of house, Point of order, Previous question)
4. 25 points for discussion during debate.

3. LEADERSHIP / FFA (ES 1.00)

- a. Consistently act in ways that align to personal and community-held ideals and principles, while employing strategies to positively influence others.
 - Participate in FFA leadership opportunities: serve as a chapter FFA officer or FFA committee member, participate in LDE/CDE teams, support chapter fundraising programs, mentor new FFA members, etc.
 - Participate in Regional Leadership Conference, State Leadership Conference, or Washington Leadership Conference.
 - Volunteer and participate in school/FFA community service activities.

- b. Use a variety of means to positively impact the direction and actions of a team or organization.
 - Serve as an active member of FFA officer team or committee
 - Participate in activities based around team building, communication, and goal setting.
 - Maintain active membership in any school group, team, or community club.

- c. Demonstrate the ability to manage a meeting to accomplish a goal or objective.
 - Participate in mock business meeting using parliamentary procedure.
 - Use team-building activities to allow students to plan and implement a goal.
Example: Capture the Flag
 - Utilize class officers to manage classrooms (attendance, announcements, Q/A for classroom activities, handing out of materials and assignments) as well as daily Opening and Closing ceremony

4. WORK BASED LEARNING / SAE / CAREER EXPLORATION (ES 2.00)

- a. Explore individual career interests, set goals, and understand career requirements.
 - Create a quality resume that outlines career goals, educational experience, honors and awards, qualifications, and references.
 - Complete the Career Finder at www.agexplorer.com. Utilize the Implementation Guide to identify potential careers and better understand the requirements.
 - Use a career aptitude test to determine skills that students are most suited for with reference to employability.

- b. Develop employability skills, personal financial literacy, workplace safety practices, and expand their knowledge of agricultural literacy.
 - Completion of a Foundational SAE
 - Participate in mock job interviews.
 - Create a monthly budget for an individual based on average income and common expenses.

Resume Rubric

Indicator	Very strong evidence of skill is present	Moderate evidence of skill is present	Weak evidence of skill is present	Points Earned
Possible Points	5-4	3-2	1-0	
Contact Information	Includes name, address, email address, and phone number; name stands out on resume; provides professional e-mail address	Name does not stand out; email address is too casual	Missing name, address, email, or phone number; email address used is inappropriate or unprofessional.	
Employment Objective	Focused objective that states how employee will help company achieve its goals.	Focused objective that states what you want from the company.	No objective identified	
Education or Relevant Coursework	Contains complete information (listed in reverse chronological order) with relevant courses listed, dates formatted correctly, GPA listed in correct format (if appropriate), includes appropriate honors and awards.	Contains information (listed in reverse chronological order) with relevant courses listed, dates formatted correctly, may show gaps in work history; inappropriate GPA listed, includes appropriate honors and awards	Information not listed in reverse chronological order, important information missing, information not listed in correct format.	
Relevant Experience and Skills	Entries are listed in reverse chronological order; company name, title, location, and dates are included; strong action verbs used with correct verb tense; personal pronouns and extraneous words are omitted; bullets are concise, direct and indicate one's impact/ accomplishments; results are quantified; bullets are listed in order of importance.	Entries are listed in reverse chronological order; entries have a pattern of one type of error; action verbs are weak; verb tenses are inconsistent; bullets are not concise or direct and do not indicate impact; bullets are written in complete sentences.	Entries are not in reserve chronological order; most entries do not include company name, dates, location, or position title; bullets are written in complete sentences; verb tenses are inconsistent; bullets are wordy, vague, or do not indicate one's impact; results are not quantified when appropriate; irrelevant or outdated information is listed.	
Achievement and Honors	Appropriate and relevant achievements and honors listed; achievements and honors related to career goal; provides specific details; listed in reserve chronological order.	Appropriate and relevant achievements and honors listed; achievements and honors related to career goal; lacks specific details related to achievements and honors; listed in reserve chronological order.	Achievements and honors not listed in reverse chronological order; inappropriate or irrelevant achievements listed; no achievement or honors are listed.	
References	References Listed appropriate references and provided complete contact information for references.	References are listed, but not all may be appropriate or not all contact information for references is included.	Inappropriate references are listed; no references listed; no contact information listed.	
Spelling, Grammar, Punctuation	Spelling, grammar, and punctuation are extremely high quality with two or less errors in the document.	Spelling, grammar, and punctuation are adequate with three to five errors in the document.	Spelling, grammar, and punctuation are less than adequate with six or more errors in the document.	
Format and General Appearance	Does not exceed two pages without overcrowding; margins are acceptable; font size and style are readable (10-12 point); headings reflect content and content substantiates headings; resume is targeted to job.	Does not exceed two pages; appears overcrowded; margins are acceptable; font size and style are readable (10-12 point); headings don't necessarily reflect content and content substantiates headings; resume is targeted to job.	Exceeds two pages; margins are inappropriate; font style is unreadable; font size is too small or too large.	
TOTAL POINTS				

Supervised Agricultural Experience 1st Nine Weeks Guidelines & Rubric

Student Username: _____
Student Password: _____
Chapter Number: _____

Dear Student & Parent/Guardian:

The SAE project is an opportunity for your child to gain additional knowledge and hands-on skills. Each SAE project is uniquely designed by each student. Each student will keep records on the hours and provide pictures to document the work completed. These records are kept in the Agricultural Experience Tracker program. We encourage you to browse the website at www.theaet.com to become more familiar with the SAE project and the records your student will keep.

Basic SAE Selection

Name of Student: _____

Name of Agriculture Class: _____ Semester/Year: _____

Type of SAE Selected: (circle one)

Foundational Placement Entrepreneurship School-Based Experimental Service Learning

Number of Hours Required for Project: _____

Brief Description of Project: _____

Parent/Guardian & Student Approval of Project

Your signature indicates you have read the information above and understand the requirements of the Supervised Agriculture Experience project.

Parent/Guardian Signature: _____ Date: _____

Student Signature: _____ Date: _____

SAE Agriculture Experience Tracker 1st Nine Weeks Items to Complete		Due Date	Teacher Score
Profile: About You: Manage/Edit Personal Profile- <ul style="list-style-type: none"> Students update membership information, demographic information and mobile device set-up. Also enter FFA membership information if applicable. 			___/10
Profile: About You: Record your agriculture class schedule- <ul style="list-style-type: none"> Select and add the agriculture education class you are currently enrolled in. 			___/5
Profile: Your Activities: Develop your AET Experiences- <ul style="list-style-type: none"> Create a new SAE "experience" if you are a new agriculture education student. OR Update/Edit Experience if returning agriculture education student. 			___/10
Profile: Your Activities: Develop Your AET Experiences- <ul style="list-style-type: none"> Experiences Manager Select "Plan"- complete the following items: 			
1.	Description & Overview of SAE: Follow instructions provided.		___/25
2.	Estimated Investment of Time and Supervision: Follow instructions for completing information. See your agriculture education instructor for the minimum number of hours you must complete: Hour Requirement: _____		___/25
3.	Learning Outcomes: The student must provide a minimum of 3 goals for the project.		___/25
Journal: Time in AET Experiences <ul style="list-style-type: none"> Begin recording time and complete journal entries for all hours worked. The student must record hours within 1 week of completing the activity to received full credit. Every journal entry must include detailed grammatically correct information. 			
Pictures <ul style="list-style-type: none"> A minimum of 10 pictures are required for all SAE projects. For Improvement type SAE projects, the student must show before, during and after pictures. The student should be visible in all pictures and demonstrate skills and tasks directly associated with the project. All pictures are uploaded and presented in the Agricultural Experience Tracker program. 			
Profile: Resume Information <ul style="list-style-type: none"> EXTRA CREDIT- complete for extra credit points: 2nd nine weeks 			
Profile: Record school & community involvement activities. <ul style="list-style-type: none"> EXTRA CREDIT- complete if applicable. Counts towards extra credit points only. 2nd nine weeks. 			
1st Nine Weeks Total Points			___/100

Supervised Agricultural Experience 2nd Nine Weeks Guidelines & Rubric

Student Username: _____

Student Password: _____

Chapter Number: _____

All SAE project items are due: _____

Any items not completed by this date will receive a 10% per day penalty.

NO SAE projects will be accepted after: _____

Congratulations! You are now in the “completion phase” of the SAE project where the student will record all hours worked, take pictures of the project and complete journals to record the activities they have completed. Here are detailed instructions on how to complete items that are due for your SAE during 2nd Nine Weeks:

A. To fill in Learning Outcome Skills:

1. Log into www.theaet.com.
2. Click on the “profile” tab.
3. Click on “Develop your AET Experiences.”
4. Click on “plan” for the AET Experience you are completing this semester.
5. Click on the “Learning Outcomes” tab.
6. Write 5 skills you learned and/or observed for your SAE project this semester. These skills should be written under the 3 goals you wrote during the 1st nine weeks.
7. Skills must be “measurable” and written in complete sentences using correct grammar and punctuation to receive full credit:
 - i. Example of student skills that **WOULD NOT** receive full points:
 1. “Become a better person”
 2. “Learn how to plant things.”

B. To record time and journals in the AET Tracker:

1. Log into www.theaet.com.
2. Click on the “journals” tab in the middle of the page.
3. Click on “Time in AET Experiences.”
4. Fill in the date you completed hours.
5. Select the category that the hours apply to:
 - a. If you have more than one SAE experience, then select the one you are completing for this semester.
6. Name the activity. Ex: “Building fence braces.”
7. Select the “type” of experience.
8. Write a journal that describes what activities you completed that day. Be specific. Use correct grammar and punctuation to receive full points.
9. Record the number of hours you worked in the “outside class” box.
10. Select who supervised you for this activity.

C. To upload pictures in the AET Tracker:

1. Log into www.theaet.com.
2. Click on the "portfolio" tab on the left-hand side of the screen.
3. Click on "browse" and select the picture(s) you want to upload.
4. Click on "upload."
5. Once pictures are uploaded, click on "edit" and complete the following:
 - a. Fill in the date the picture was taken in the "date" box.
 - b. Name the picture in the "title" box.
 - c. Click on the "experience" box and select your current AET Experience.
 - d. Write a minimum of 2 sentences explaining what you are doing in the picture.
6. Click "save" when complete.
7. Remember:
 - a. The student must have 10 pictures to receive full credit for this portion of your SAE.
 - b. **For Improvement type SAE projects, the student must show before, during and after pictures.**
 - c. **The student should be visible in all pictures and demonstrate skills and tasks directly associated with the project.**

<p style="text-align: center;">SAE Agriculture Experience Tracker 2nd Nine Weeks Items to Complete</p> <p style="text-align: center;">ALL SAE ITEMS DUE: _____</p>	<p style="text-align: center;">Teacher Score</p>
<p>1st Nine Weeks Score: This score is generated from the 1st nine weeks of your project.</p>	<p style="text-align: center;">_____/10pts</p>
<p>AET Experience Learning Outcomes: During the 1st nine weeks, you wrote 3 goals you had for your project, now you need to write:</p> <ul style="list-style-type: none"> • 5 skills you learned and/or observed during the course of this project. • Skills must be written in complete sentences and use correct punctuation and grammar to receive full credit. 	<p>Skill 1: ____/5pts Skill 2: ____/5pts Skill 3: ____/5pts Skill 4: ____/5pts Skill 5: ____/5pts</p>
<p>Journals & Time Log:</p> <ul style="list-style-type: none"> • Students enter time and complete a journal for each time work is completed for your SAE project. • Students must record hours within 1 week of completing the activity to received full credit • Every journal entry must include detailed grammatically correct information. • You MUST complete a minimum of 15 hours to earn full credit. • Incomplete or missing journal entries associated with the time recorded WILL NOT count towards hours completed. • Students earn 3pts per hour completed and correctly recorded. 	<p style="text-align: center;">3pts per hour 15 hours required</p> <p style="text-align: center;">____ hours X 3 = ____/45pts</p>
<p>Pictures</p> <ul style="list-style-type: none"> • A minimum of 10 pictures are required for all SAE projects. • For Improvement type SAE projects, the student must show before, during and after pictures. • The student should be visible in all pictures and demonstrate skills and tasks directly associated with the project. • Each picture MUST have a 2-sentence caption describing the skill and/or activity the student is completing. • Each picture is worth 1 point for a total of 10 points. • Each caption is worth 0.5 points for a total of 10 points. 	<p style="text-align: center;">2pts per picture/caption</p> <p style="text-align: center;">____ captions X .5 = ____/10pts</p> <p style="text-align: center;">____ pictures X 1 = ____/10pts</p>
<p style="text-align: right;">2nd Nine Weeks Points</p>	<p style="text-align: center;">_____/100</p>
<p>Profile: Resume Information</p> <ul style="list-style-type: none"> • EXTRA CREDIT- students complete for up to 2 extra credit points. 	<p style="text-align: center;">+ ____/2pts</p>
<p>Profile: Record school & community involvement activities.</p> <ul style="list-style-type: none"> • EXTRA CREDIT- complete if applicable. • Students earn 0.25pts for each school & community involvement activity for a maximum of 2pts added to overall SAE score. 	<p style="text-align: center;">+ ____/2ts</p>
<p style="text-align: center;">SAE 2nd Nine Weeks Final Grade</p>	<p style="text-align: center;">_____/100</p>

SAE Project Proposal Sheet

Name: _____ Period: _____

The SAE (Supervised Agricultural Experience) is 30% of your final grade in this class. To receive an A you must put a minimum of _____ hours into your project. The SAE can be any project completed outside of class time that deals with agriculture (working with plant material, animals, or natural resources). Please be thorough in your planning of the project. You must obtain permission for your project from your instructor by using this proposal sheet and having your parent/guardian to sign the bottom.

This form is due on _____. You will be provided a record book once your project has been selected and approved. The first three or four pages of the record book will be due _____. The completed record book will be due _____.

(Due Today) Top two choices for my SAE project:

1. Type of SAE: _____

a. Project Description:

2. Type of SAE: _____

a. Project Description:

(Chosen Project is circled)

3. Timeline for Chosen Project:

Month 1	Month 2	Month 3	Month 4	Month 5

4. Parent/Guardian Approval Signature: _____ Date: _____

5. Student Signature: _____ Date: _____

5. PLANT ANATOMY & TAXONOMY (ES 3.00)

- a. Describe the purpose and functions of roots, stems, leaves, flowers, fruits, and seeds. Explain the difference between monocots and dicots.
 - Germinate seeds of dicot and monocot plants. Students monitor growth and development and then compare and contrast observed differences.
 - Create a plant biography.
 - Complete edible plant parts lab.

- b. Demonstrate proper use of taxonomic naming and explain why scientific plant names are used.
 - Use a “Plant of the Day” activity and/or plant walks around campus to collect species samples. Maintain samples in the classroom or greenhouse to review and reinforce the selected species. Evaluate proper use of naming through teacher-created identification assessment.
 - Create flash cards for the plants listed on the Introduction to Horticulture CDE plant identification sheet.

Creating a Plant Biography

In this assignment you will be creating a plant biography of a plant in your home landscape, or another area that is accessible to you. Please do not select a plant that will be covered in the Horticulture 1 List. This can be created using paper, or using platforms like Microsoft Publisher or Word, or sites like Canva.com. The following information should be included.

General information:

1. Scientific name
2. Common name(s)
3. Classification of use (tree, shrub, groundcover, bedding plant, cut flower, etc.)
4. Life cycle (annual, biennial, perennial)
5. Leaf retention (evergreen or deciduous)
6. Season crop type (cool or warm season)
7. Sun exposure
8. Plant size at maturity
9. Hardiness zone
10. Any additional facts that add interest.

Plant Anatomy:

1. Leaves
 - Arrangement (opposite, alternate, whorled)
 - Composition (simple or compound)
 - Margin type (entire, crenate, serrate, etc.)
 - Size
 - Color
 - Dissection (petiole, midrib, veins, apex, margin)
 - Stem Dissection (lenticels, bud scale scars, leaf scars, terminal bud, axillary/lateral bud)
2. Flower
 - Color
 - Season
 - Complete or incomplete
 - Dissection (petals, sepals, stamen and/or pistil)
3. Fruit
 - Type (pome, nut, berry, etc.)
 - Picture
4. Roots
 - Type (fibrous, tap, etc.)

For the dissection part of plant's anatomy, you may use dried plant parts or a high-quality picture if the part is not available.

PLANT PARTS LAB CHART

Place an "X" in the column of the part of the plant you are eating. In the fruit column determine if you are eating a pome, drupe, berry, modified berry, aggregate fruit, accessory fruit or multiple fruit.

Sample	Root	Stem	Leaf	Flower	Fruit
Tomato					
Celery					
Apple					
Grape					
Pineapple					
Broccoli					
Carrot					
<i>Watermelon</i>					
<i>Lemon</i>					
<i>Avocado</i>					
<i>Cherry</i>					

Types of fruits

1. **Pome** is a fleshy fruit which has a central core that usually has five seeds and is surrounded by a thick outer layer. Examples are apples and pears.
2. **Drupe** is a fleshy fruit which has one seed enclosed in a hard-stony material. Examples are plum, peach and cherry.
3. **Berry** is an entire ovary that is fleshy and often juicy with thin skin. Examples of a berry are tomato and grape.
4. **Modified berry** is like a berry but with a tough covering. Examples are grapefruit and cucumber.
5. **Aggregate fruit** are compound fruit composed of many tiny drupes clustered on a single receptacle. Examples are blackberry and raspberry.
6. **Accessory fruit** are small and hard and are scattered over the surface of the receptacle. The edible part forms an enlarged receptacle with seeds usually on the outside. An example is a strawberry.
7. **Multiple fruit** is a compound fruit formed from several flowers in a cluster. Examples are pineapple and mulberry.

6. PLANT GROWTH AND DEVELOPMENT (ES 4.00)

- a. Outline and describe the processes of photosynthesis, respiration, translocation, and transpiration.
 - Create a storybook, video, or other graphic display that describes a day in the life of a plant, including listed processes and proper terminology for plant anatomy.
- b. Demonstrate understanding of hardiness zones.
 - Research the hardiness zone areas and best growing conditions for a percentage (___%) of the Introduction to Horticulture plant list.

7. SEXUAL AND ASEXUAL PLANT PROPAGATION (ES 4.00)

- a. Outline the similarities and differences between asexual and sexual propagation methods, and describe the requirements for seed germination and growth.
 - Identify the most effective propagation technique for 25 plants from the NCCFA Introduction to Horticulture Plant List.
- b. Perform various methods of asexual propagation.
 - Teacher-created performance assessment of various propagation techniques (cuttings, layering, division, budding, & grafting) utilizing plants, facilities, and resources available at your school or in your area.
- c. Describe the application of advanced propagation techniques: grafting, budding, mound and air layering, and tissue culture.
 - Create a slide presentation, factsheet, or how-to-video displaying assigned propagation method including: important facts, steps, mistakes to avoid, and other pertinent information for assigned technique.

Official Plant Identification List
NC FFA Introduction to Horticulture Career Development Event

Plant specimens will be numbered 1-20 for the Regional Event and 1-40 for the State Event. Contestant is to write the appropriate number in the space beside the name of the specimen.

Contestant Name _____ Contestant # _____ Score _____

- | | |
|---|--|
| _____ <i>Abelia X grandiflora</i> /Glossy Abelia | _____ <i>Iris X germanica</i> var. <i>florentine</i> /Bearded Iris |
| _____ <i>Acer palmatum</i> /Japanese Maple | _____ <i>Juniperus conferta</i> /Shore Juniper |
| _____ <i>Acer rubrum</i> /Red Maple | _____ <i>Juniperus horizontalis</i> 'Plumosa,' 'Bar Harbor,'
or 'Wiltonii'/Creeping Juniper |
| _____ <i>Ageratum mexicanum</i> /Ageratum | _____ <i>Lagerstroemia indica</i> cv./Crape Myrtle |
| _____ <i>Ajuga reptans</i> /Ajuga | _____ <i>Ligustrum japonicum</i> cb./Japanese Privet |
| _____ <i>Aracaria heterophylla</i> /Norfolk Island Pine | _____ <i>Liquidambar styraciflua</i> /Sweetgum |
| _____ <i>Asparagus densiflorus</i> 'Spengeri'/
Sprengerii Fern | _____ <i>Liriope muscari</i> /Liriope (Green or
Varigated cv.) |
| _____ <i>Aucuba japonica</i> /Japanese Aucuba | _____ <i>Magnolia grandiflora</i> /Southern Magnolia |
| _____ <i>Begonia X semperflorens-cultorum</i> /
Wax Begonia | _____ <i>Malus</i> sp. or cv./Flowering Crabapple |
| _____ <i>Berberis thunbergii</i> /Japanese Barberry | _____ <i>Maranta leuconeura</i> var. <i>kerchoviana</i> /
Prayer Plant |
| _____ <i>Betula nigra</i> /River Birch | _____ <i>Myrica cerifera</i> /Wax Myrtle |
| _____ <i>Buxus sempervirens</i> /Common Boxwood | _____ <i>Nandina domestica</i> /Heavenly Bamboo
Or Dwarf Nandina |
| _____ <i>Canna X generalis</i> /Canna | _____ <i>Nephrolepis exaltata</i> cv./Boston Fern |
| _____ <i>Cercis canadensis</i> /Eastern Red Bud/
Judas Tree | _____ <i>Ophiopogon japonicus</i> /Mondo Grass |
| _____ <i>Chlorophytum comosum</i> cv./Spider Plant | _____ <i>Pelargonium X hortorum</i> /Geranium |
| _____ <i>Chrysanthemum morifolium</i> or <i>Dendranthema</i>
<i>X grandiflora</i> /Florist Chrysanthemum | _____ <i>Pelargonium peltatum</i> /Ivy Leaf Geranium |
| _____ <i>Chrysanthemum X superbum</i> /Shasta Daisy | _____ <i>Petunia</i> sp./Petunia |
| _____ <i>Coleus X hybridus</i> /Coleus | _____ <i>Philodendron scandens</i> var. <i>oxycardium</i> /
Parlor Ivy |
| _____ <i>Cornus florida</i> /Flowering Dogwood | _____ <i>Pinus mugo</i> var. <i>mugo</i> /Mugo Pine |
| _____ <i>X Cupressocyparis leylandii</i> /Leyland Cypress | _____ <i>Pinus strobus</i> /Eastern White Pine |
| _____ <i>Dieffenbachia maculata</i> /Dumbcane | _____ <i>Pinus Taeda</i> /Loblolly pine |
| _____ <i>Epipremnum aureum</i> cv./Golden Pothos | _____ <i>Plectranthus australis</i> /Swedish Ivy |
| _____ <i>Euonymus alata</i> /Winged Enonymus | _____ <i>Prunus serrulata</i> 'Kwanzan'/
Japanese Flowering Cherry |
| _____ <i>Euonymus japonica</i> or 'Variegata'/
Evergreen Euonymus | _____ <i>Pyrus calleryana</i> 'Bradford'/Bradford Pear |
| _____ <i>Euphorbia pulcherrima</i> cv./Poinsettia | _____ <i>Quercus palustris</i> /Pin Oak |
| _____ <i>Ficus benjamina</i> /Weeping or Benjamin Fig | _____ <i>Quercus phellow</i> /Willow Oak |
| _____ <i>Ficus elastica</i> 'Decora'/Decora Rubber Plant | _____ <i>Rhododendron catawbiense</i> /Catawba Hybrid
Rhododendron |
| _____ <i>Forsythia X intermedia</i> /Border Forsythia | _____ <i>Rhododendron kiusianum</i> or <i>Rhododendron</i>
<i>obtusum japonicum</i> /azalea |
| _____ <i>Hedera helix</i> /English Ivy | _____ <i>Saintpaulia ionantha</i> /African Violet |
| _____ <i>Hemerocallis</i> cv./Day Lily | _____ <i>Salvia splendens</i> /Salvia |
| _____ <i>Hosta</i> sp./Hosta | _____ <i>Schefflera arboricola</i> /Dwarf Schefflera |
| _____ <i>Ilex X attenuata</i> 'Fosteri'/Fosteri Holly | _____ <i>Spathiphyllum</i> cvs./Peace Lily |
| _____ <i>Ilex cornuta</i> 'Dwarf Burford'/
Dwarf Burford Holly | _____ <i>Tagetes erecta</i> /African Marigold |
| _____ <i>Ilex crenata</i> 'Helleri'/Helleri Holly | _____ <i>Tradescantia zebrina</i> /Purple Wandering Jew |
| _____ <i>Ilex vomitoria</i> 'Nana'/Dwarf Yaupon | _____ <i>Viola X wittrockiana</i> /Pansy |
| _____ <i>Impatiens</i> /Impatiens Cultivars and Hybrids | |

Advanced Propagation Technique Assignment

For this assignment each student will work individually. You will be responsible for creating a slide show, factsheet, or how-to video about a propagation technique. This will be presented by you to the rest of the class. ***You are the teacher!*** Your presentations need to include the following information about your technique:

- 1. Name of Method**
- 2. Origin of the technique** (when and where)
- 3. Main use** (best situations for use (growing/dormant), common species, common problems and mistakes to avoid, best practices, etc)
- 4. Pictures of the technique** (minimum of 5)
- 5. Sources of Information** (listed separately at the end)

Propagation Technique Assignment Rubric

Here is the rubric used to grade your presentations:

Slideshow: _____/60

- *Name of Method* _____/5
- *Origin of the technique* _____/10
- *Main Use* _____/25
- *Pictures* _____/15
- *Sources of Information* _____/5

Presentation & Notes _____/40

- *Eye contact with class* _____/5
- *Voice* _____/5
- *Stance* _____/5
- *Appearance* _____/5
- *Notes Chart* _____/20

8. PROPERTIES OF SOILS (ES 5.00)

- a. Describe the properties of different horticultural growing media and articulate the advantages of using horticultural soil.
 - Identify various components of horticultural growing mixes (peat moss, vermiculite, perlite, sand, bark, etc.)

- b. Demonstrate an understanding of soil profiles and proper techniques for sampling from surface and subsurface soil layers.
 - Identify soil layers and evaluate soil properties within a profile, including structure and texture.
 - Compete in the NCFFA Land Judging CDE.

9. NUTRIENTS AND FERTILIZERS (ES 6.00)

- a. Identify macro and micro nutrients and the role they play in plant growth.
 - Properly collect a soil sample from a specific site and submit to NCDA for evaluation. Analyze received results and make recommendations for pH correction and fertility for desired crop.
 - i. <https://www.ncagr.gov/agronomi/uyrst.htm>
- b. Compare and contrast types of fertilizers and methods for applying various fertilizers.
 - ???

10. ESTABLISHING A GARDEN (ES 7.00)

- a. Demonstrate an understanding of the various types of gardens.
 - Develop a presentation of three different types of gardens.
- b. Design a garden with appropriate plant varieties based on season, scale, and location.
 - Develop a chart to show warm versus cool season plants.
 - Students design, plan, and plant a garden on campus, and are responsible for maintenance and harvest.

11. CHARACTERISTICS OF PESTS & DISEASES (ES 8.00)

- a. Identify various plant pests based on physical characteristics (anatomy), as well as life cycles.
 - Assess student knowledge of plant pests using the NCFFA Introduction to Horticulture Practicum – Pest ID List.

- b. Compare and contrast the differences between diseases, bacteria, fungi, and viruses; and identify various examples of each.
 - Compose and deliver a presentation on a disease, bacteria, fungi, or virus that affects a specific plant species.

North Carolina FFA Association

Introduction to Horticulture Practicum – Pest ID List

Contestant Name _____ Contestant # _____ Score _____

Pest specimens will be numbered 1-5. Contestant is to write the appropriate number in the space beside the name of the specimen. Each correctly identified pest is worth two points for a total of ten points for the pest identification portion of the event.

Weeds

- _____ Buckhorn Plantain
- _____ Broadleaf Plantain
- _____ Crabgrass
- _____ Chickweed
- _____ Dandelion
- _____ Goose grass
- _____ Henbit
- _____ Oxalis
- _____ Spurge (prostrate)
- _____ White Clover
- _____ Wild Garlic
- _____ Yellow Nutsedge

Insects

- _____ Aphid
- _____ Bagworms
- _____ Caterpillar
- _____ Japanese Beetle
- _____ Lacebug
- _____ Mealybugs
- _____ Scale
- _____ Spider Mites
- _____ Thrips
- _____ White Fly

Diseases

- _____ Black Spot
- _____ Chlorosis
- _____ Damping off
- _____ Fireblight
- _____ Powdery Mildew
- _____ Root Rot
- _____ Rust

Plant Pest - Presentation Assignment

Student Instructions:

- Students will research, compose and deliver a 4-6 minute presentation on a plant pest. Each presentation must be the result of the student's own efforts.
- The bibliography should follow APA style.
- Facts and data may be obtained from any reputable source.
- Time Limit- Each presentation shall be a minimum of four minutes in length and a maximum of six minutes. At the conclusion, there will be a question/answer session that does not include the 6-minute time frame.

Assignment: Use the following format to create a presentation outline and use the information below to help guide you on what needs to be included.

I. Introduction

a. Provide an introduction to your presentation, such as a story or facts/figures that will lead the audience into your topic.

b. Preview Statement: This is the equivalent of the thesis statement that you write for a regular English paper. Ex: "Today I'm going to help you discover the world of forestry by first explaining how timber is harvested, and then we'll look at ... The preview statement overviews the three main topic ideas of your presentation.

II. Body: This is the "meat and potatoes" of your presentation. In your outline give pieces of information that you would include in each main point.

III. Conclusion

a. Review Statement: This is simply the reverse of your Preview Statement. Ex: Today we looked at the world of forestry by first...

b. Closing Remarks

Plant Pest Presentation Assignment – Grading Rubric

Indicators	Very strong evidence skill is present	Moderate evidence skill is present	Strong evidence skill is not present	Points Earned
Possible Points	5-4	3-2	1-0	
A. Supporting Evidence	Examples (stories, statistics, etc.) are vivid, precise, and clearly explained.	Examples are usually concrete, sometimes needs clarification.	Examples are sometimes confusing, leaving the listeners with questions.	
B. Persuasive use of evidence	Exemplary use of evidence to persuade listeners.	Sufficient use of evidence to persuade listeners.	Has difficulty using evidence to persuade listeners.	
C. Pace	Speaks very articulately at rate that engages audience.	Speaks articulately but occasionally speaks too fast or has long unnecessary hesitations.	Speaks too fast or too slow to engage audience.	
D. Command of Audience	Speaker uses appropriate emphasis and tone to captivate the audience.	Speaker presents speech as mere repeating of facts and speech comes across as a report.	Speaker lacks enthusiasm and power to engage the audience	
E. Eye Contact	Constantly looks at the entire audience (90 - 100% of the time).	Mostly looks around the audience (60 – 80% of the time).	Occasionally looks at someone or some groups (less than 50% of the time).	
F. Mannerisms and gestures	No nervous habits are displayed. Hand motions are expressive and used to emphasize talking points.	Sometimes exhibits nervous habits. Hands are sometimes used to express or emphasize.	Displays some nervous habits. Hands are not used to emphasize talking points; hand motions are sometimes distracting.	
G. Poise	Portrays confidence and composure through appropriate body language (stance, posture, facial expressions)	Maintains control most of the time, rarely loses composure.	Lacks confidence and composure.	
TOTAL SCORE:				

Student Name: _____

Class/Period: _____

12. INTEGRATED PEST MANAGEMENT & PESTICIDES (ES 9.00)

- a. Outline the benefits of IPM as a pest control program, and explain when biological control should be used and at what point chemicals must be considered.
 - Develop and implement a pest control program for the school greenhouse.

- b. Demonstrate understanding of key signal words and safety information on pesticide labels.
 - Demonstrate knowledge of proper pesticide handling and application through the creation of a safety brochure, how-to video, or other graphic display. Make sure to include measuring, choosing appropriate PPE, correctly mixing, and application techniques.