

Horticulture Science 2

Holton Agriculture Education Department

Verification Signatures _____

Hours Completed _____

Student: _____ Date: _____

Instructor: _____ Date: _____

Name: _____ SSN: _____/_____/_____

Instructor: Jason M. Larison School Year: _____

Key to Integrated Competencies

(A) - Academic {AC - Communications/English, AM-Math, AS-Science}
(CD) - Career Development (E) - Experience-Based (L) - Leadership

Circle to indicate level of competency achieved:

3 Skilled-Works Independently 2 Limited skill-Needs assistance 1 Skill undeveloped-but received instruction 0 No exposure

I. The Horticulture Industry and Careers

- 3 2 1 0 1. List 15 career opportunities available in the horticulture industry
- 3 2 1 0 2. Explain the impact of horticulture on the local economy
- 3 2 1 0 3. Identify local career opportunities in horticulture
- 3 2 1 0 4. List the level of education required for 10 careers in the horticulture science field

- 3 2 1 0 3. Participate in Community Development Activities established by the POA (L)

VI. Pruning and Pinching

- 3 2 1 0 1. List reasons for pruning
- 3 2 1 0 2. Demonstrate pruning stems at proper angles (E)
- 3 2 1 0 3. Demonstrate pruning & pinching techniques (E)

II. Supervised Agriculture Experience (SAE) & Record Keeping

- 3 2 1 0 1. Identify and maintain the SAE (CD)
- 3 2 1 0 2. Construct a personal budget (AM)
- 3 2 1 0 3. Utilize the Kansas FFA SAE Record book to monitor the SAE (CD)
- 3 2 1 0 4. Complete a local and district proficiency award application (L)
- 3 2 1 0 5. Complete chapter and/or State FFA Degree Applications (L)
- 3 2 1 0 6. Use Quicken to track income and expense in cash, checking, and savings (CD)
- 3 2 1 0 7. Track SAE skills developed, hours worked as well as FFA, School, and community activities using the Ag Ed record book. (CD)
- 3 2 1 0 8. Set appropriate long and short term goals for the SAE program.

- 3 2 1 0 6. Present a memorized 3-8 minute agriculture speech to the class (AC, L, CD)
- 3 2 1 0 7. Participate in the Nursery Landscape Career Development Event(CD)
- 3 2 1 0 8. Participate in the Floriculture Career Development Event (CD)

- 3 2 1 0 1. Explain plant preservation techniques
- 3 2 1 0 2. List the benefits of drying plants
- 3 2 1 0 1. Demonstrate the pressing method of drying plants
- 3 2 1 0 2. Demonstrate the air drying method of drying plants
- 3 2 1 0 3. Demonstrate the silica gel method of plant preservation

IV. Plant Taxonomy

- 3 2 1 0 1. List characteristics for plant ID(AS)
- 3 2 1 0 2. Identify over 125 horticultural crops by their common names (AS)

VIII. Terrariums

- 3 2 1 0 1. Identify the types of plant arrangements
- 3 2 1 0 2. Determine the care of a terrarium

V. Plant Propagation

- 3 2 1 0 1. Discuss the difference between asexual and sexual propagation (AS)
- 3 2 1 0 2. Describe the environmental requirements for seeds to germinate (AS)

IX. Plant Arrangements

- 3 2 1 0 1. Identify different types of plant arrangements
- 3 2 1 0 2. Identify themes used in plant arrangements
- 3 2 1 0 3. List 10 materials used in plant arrangements

A. Lab Activities (E)

- 3 2 1 0 1. Collect cuttings for asexual propagation (AS)
- 3 2 1 0 2. Grow plants from each of the following methods: (AS)

A. Lab Activities (E)

- 3 2 1 0 1. Design and construct a corsage or boutonniere
- 3 2 1 0 2. Design and construct a holiday plant arrangement
- 3 2 1 0 3. Design and construct a wreath or centerpiece

III. The National FFA Organization and Leadership

- 3 2 1 0 1. Participate in Student Development Activities as established by the POA (L)
- 3 2 1 0 2. Participate in Chapter Development Activities as established by the POA (L)

X. Weed, Disease, And Pest Control

- 3 2 1 0 1. Identify weed, disease, and pest damage (AS)
- 3 2 1 0 2. Illustrate diseased material handling techniques (AS)
- 3 2 1 0 3. Demonstrate and how to mix pesticides (AS)
- 3 2 1 0 4. Practice safety with pesticides & fertilizers (AS)

- 3 2 1 0 2. Identify 30 various trees used in the landscape
- 3 2 1 0 3. Identify 10 various bulbs plants used in the landscape
- 3 2 1 0 4. Describe the features of a landscape plan
- 3 2 1 0 5. Design a landscape portrait view using computer software
- 3 2 1 0 6. Design a landscape architects plan using computer software
- 3 2 1 0 7. Calculate the costs for purchasing and installing a landscape

XX. Mathematics Career Development Skills

- 3 2 1 0 1. Estimate, apply, and solve problems involving fractions, decimals, and percentages (AM)
- 3 2 1 0 2. Translate written and verbal statements into mathematic expressions (AM)
- 3 2 1 0 3. Convert common units of measurement within and/or across measurement systems (AM)
- 3 2 1 0 4. Apply concepts of measurement such as distance, direction, rate, and time (AM)
- 3 2 1 0 5. Construct or interpret tables, charts, maps, and/or graphs (AM)
- 3 2 1 0 6. Decide whether a problem is best solved with a computer, calculator, paper and pencil, or mental arithmetic techniques (AM)

XI. Soil Fertility

- 3 2 1 0 1. Describe methods of building soil fertility (AS)
- 3 2 1 0 2. List and differentiate between the macro and micro nutrients (AS)
- 3 2 1 0 3. Explain soil sampling (AS)
- 3 2 1 0 4. Describe how pH affects plant growth (AS)

- 3 2 1 0 1. Design a landscape plan
- 3 2 1 0 2. Install a landscape
- 3 2 1 0 3. Determine the costs of a landscape

- 3 2 1 0 1. Follow oral instructions (AC)
- 3 2 1 0 2. Participate in group communication activities (AC)
- 3 2 1 0 3. Give oral directions (AC)
- 3 2 1 0 4. Use language and format appropriate to the subject matter, purpose, and audience (AC)

A. Lab Activities (E)

- 3 2 1 0 1. Perform soil tests (AS)
- 3 2 1 0 2. Interpret soil test results (AS)
- 3 2 1 0 3. Analyze soil test results (AS)
- 3 2 1 0 4. Formulate the proper mix of fertilizer into media (AS)
- 3 2 1 0 5. Demonstrate the application of liquid and granular fertilizer (AS)

A. Lab Activities (E)

- 3 2 1 0 1. Design a landscape plan
- 3 2 1 0 2. Install a landscape
- 3 2 1 0 3. Determine the costs of a landscape

XXI. Communications Career Development Skills (CD)

- 3 2 1 0 1. Follow oral instructions (AC)
- 3 2 1 0 2. Participate in group communication activities (AC)
- 3 2 1 0 3. Give oral directions (AC)
- 3 2 1 0 4. Use language and format appropriate to the subject matter, purpose, and audience (AC)

XII. Irrigation Systems

- 3 2 1 0 1. Identify types of indoor irrigation equipment
- 3 2 1 0 2. Identify types of outdoor irrigation equipment

- 3 2 1 0 3. Describe the procedure for watering, fertilizing, and caring for vegetables
- 3 2 1 0 4. Identify 10 vegetable plants and products (AS)

- 3 2 1 0 1. Identify and explain the use of common supplies for a given occupational area.
- 3 2 1 0 2. Set priorities in which several tasks will be accomplished
- 3 2 1 0 3. Utilize time management to reduce conflicts
- 3 2 1 0 4. Apply rules including punctuality, attendance, and work ethic
- 3 2 1 0 5. Access and use information to develop educational and career options
- 3 2 1 0 6. Demonstrate stress management skills

A. Lab Activities (E)

- 3 2 1 0 1. Care for a vegetable garden

XIII. Sexual Propagation

- 3 2 1 0 1. Describe the process of pollination (AS)
- 3 2 1 0 2. Identify the parts of a flower (AS)

- 3 2 1 0 2. Identify and describe the components of a soil-less media (AS)
- 3 2 1 0 3. List the characteristics of the components of a soil-less media (AS)
- 3 2 1 0 4. Design a soil-less mixture for a given situation (AS)

- 3 2 1 0 1. Define, understand, and use common computer technology terms (CD)
- 3 2 1 0 2. Compose, organize, and edit information using a computer (CD)
- 3 2 1 0 3. Use presentation software to design and create a presentation (CD)
- 3 2 1 0 4. Use ag related software/websites (CD)
- 3 2 1 0 5. Access, navigate, & use on-line services (CD)
- 3 2 1 0 6. Send and receive email messages with enclosures (CD)
- 3 2 1 0 7. Use Quicken to manage personal finances (CD)
- 3 2 1 0 8. Use Microsoft Office (Word, Excel, Powerpoint, and Internet Explorer) to complete projects (CD)

A. Lab Activities (E)

- 3 2 1 0 1. Test and calculate seed germination (AS)
- 3 2 1 0 2. Demonstrate & explain seed propagation (AS)

XIV. Foliage Plants

- 3 2 1 0 1. Identify 35 species of house plants (AS)
- 3 2 1 0 2. List diseases, pests, and nutritional deficiencies in foliage plants (AS)

- 3 2 1 0 1. Identify common forms used in farm tax preparation
- 3 2 1 0 2. Define common terms used in tax planning
- 3 2 1 0 3. Explain the importance of record keeping in tax planning
- 3 2 1 0 4. Locate tax resources and forms on the Internet

- 3 2 1 0 1. Define, understand, and use common computer technology terms (CD)
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A. Lab Activities (E)

- 3 2 1 0 1. Demonstrate techniques for foliage plants care

XV. Turf Grasses

- 3 2 1 0 1. Identify 4 turf grasses (AS)
- 3 2 1 0 2. Explain proper mowing techniques

- 3 2 1 0 3. Explain the importance of record keeping in tax planning
- 3 2 1 0 4. Locate tax resources and forms on the Internet

- 3 2 1 0 4. Use ag related software/websites (CD)
- 3 2 1 0 5. Access, navigate, & use on-line services (CD)
- 3 2 1 0 6. Send and receive email messages with enclosures (CD)
- 3 2 1 0 7. Use Quicken to manage personal finances (CD)
- 3 2 1 0 8. Use Microsoft Office (Word, Excel, Powerpoint, and Internet Explorer) to complete projects (CD)

XVI. Landscape Design

- 3 2 1 0 1. Identify 25 various shrubs used in the landscape

- 3 2 1 0 1. Fill out a Form 1040 (AM)

- 3 2 1 0 7. Use Quicken to manage personal finances (CD)
- 3 2 1 0 8. Use Microsoft Office (Word, Excel, Powerpoint, and Internet Explorer) to complete projects (CD)