Student's Name_____ **APPLIED GREENHOUSE AND NURSERY MANAGEMENT AG 0340**

Directions:	Evaluate the trainee using the rating scale below and check the appropriate number to indicate the degree of competency achieved. The numerical ratings of 3, 2, 1, and 0 are not intended to represent the traditional school grading system of A, B, C, D, and F. The descriptions associated with each of the numbers focus on level of student performance for each of the tasks listed below.
Rating Scale:	**0 - No Exposure** - no information nor practice provided during training program, complete training required. **1 - Exposure Only** - general information provided with no practice time, close supervision needed and additional training required. **2 - Moderately Skilled** - has performed independently during training program, limited additional training may be required. **3 - Skilled** - can perform independently with no additional training.

1. Number of Competencies Evaluated _____
2. Number of Competencies Rated 2 or 3 _____
3. Percent of Competencies Attained (2/1) _____

_____
Grade

_____ _____
Instructor Signature Date

01.0 Greenhouse Structures and Management
The student will be able to:

0 1 2 3		
☐☐☐☐	01.01	Identify the different types of greenhouses and their arrangements
☐☐☐☐	01.02	Calculate the size of equipment needed to heat, cool and circulate air within the greenhouse
☐☐☐☐	01.03	Describe the internal structures and equipment of a greenhouse
☐☐☐☐	01.04	Describe other structures used in raising plants
☐☐☐☐	01.05	Match terms and definitions associated with greenhouse and forcing structures
☐☐☐☐	01.06	Describe the uses of forcing structures
☐☐☐☐	01.07	Match the greenhouse structures with their advantages
☐☐☐☐	01.08	List the materials needed to build forcing structures
☐☐☐☐	01.09	Develop a chart of covering materials with the durability, insulation qualities, and construction costs of each
☐☐☐☐	01.10	List the functions of the alternate types of forcing structures

02.0 Nursery Management
The student will be able to:

0 1 2 3		
☐☐☐☐	02.01	Match terms and definitions associated with the nursery business
☐☐☐☐	02.02	List the occupations related to nursery occupations
☐☐☐☐	02.03	Select skills needed for various nursery occupations
☐☐☐☐	02.04	Identify as true or false statements about nursery occupations
☐☐☐☐	02.05	List occupations in nurseries that are common to your area
☐☐☐☐	02.06	Explain the use of small propagating greenhouses
☐☐☐☐	02.07	Describe the soil types best suited for various nursery plants
☐☐☐☐	02.08	Develop a plan for row and plant spacing for various nursery plants
☐☐☐☐	02.09	Identify the tools associated with nursery management
☐☐☐☐	02.10	List the advantages and disadvantages of using containers for growing nursery plants
☐☐☐☐	02.11	List the type of media used to propagate cutting seeds, and seedlings
☐☐☐☐	02.12	List the weed control methods for nurseries
☐☐☐☐	02.13	Describe the proper procedures for transplanting bareroot, ball and burlap stock
☐☐☐☐	02.14	Explain how and when to stake trees
☐☐☐☐	02.15	Describe how to protect nursery stock from winter injury

03.0 Greenhouse Occupations
The student will be able to:

0 1 2 3		
☐☐☐☐	03.01	Match terms and definitions associated with greenhouse occupations
☐☐☐☐	03.02	List and describe the occupations associated with greenhouse management
☐☐☐☐	03.03	Name the amount of education and experience needed for each of the greenhouse occupations

04.0 Ornamental Plant Identification

The student will be able to:

0 1 2 3

☐☐☐☐ 04.01 Discuss the system of plant classification
☐☐☐☐ 04.02 Identify the parts of simple and compound leaves
☐☐☐☐ 04.03 Name the types of leaf arrangement, venation and margins
☐☐☐☐ 04.04 Identify the types of leaf arrangement to the stem
☐☐☐☐ 04.05 Identify the parts of a stem
☐☐☐☐ 04.06 Match stem modification to their descriptions
☐☐☐☐ 04.07 Identify the types of inflorescence
☐☐☐☐ 04.08 Identify 100 common ornamental indoor plants
☐☐☐☐ 04.09 Identify 100 common ornamental outdoor plants

05.0 Properties of Soils

The student will be able to:

0 1 2 3

☐☐☐☐ 05.01 Identify components and properties of soils
☐☐☐☐ 05.02 Recognize soil classification systems

06.0 Leveling and Land Measurement

The student will be able to:

0 1 2 3

☐☐☐☐ 06.01 Set up leveling instrument
☐☐☐☐ 06.02 Take rod readings
☐☐☐☐ 06.03 Determine difference in elevation of two or more points
☐☐☐☐ 06.04 Record field notes for differential leveling
☐☐☐☐ 06.05 Measure distance with steel tape
☐☐☐☐ 06.06 Determine percent of slope
☐☐☐☐ 06.07 Determine land area
☐☐☐☐ 06.08 Use the hand level
☐☐☐☐ 06.09 Read legal land descriptions
☐☐☐☐ 06.10 Lay out foundations, footings, and batter boards

07.0 Climate and Zonation

The student will be able to:

0 1 2 3

☐☐☐☐ 07.01 Match terms and definitions associated with climate and plant zones
☐☐☐☐ 07.02 List the factors which influence weather
☐☐☐☐ 07.03 Explain plant hardiness and the importance of it in choosing plants for landscaping

0 1 2 3

☐☐☐☐ 07.04 Select appropriate plants for various landscaping conditions and considering climate
☐☐☐☐ 07.05 Demonstrate the ability to determine climate zone and develop a landscape plan for a given area

08.0 Lawn Site Quality and Preparation

The student will be able to:

0 1 2 3

☐☐☐☐ 08.01 Identify common lawn tools and the safety practices associated with them
☐☐☐☐ 08.02 Demonstrate the ability to prepare a lawnsite for proper drainage
☐☐☐☐ 08.03 Develop an irrigation plan for a lawn site
☐☐☐☐ 08.04 Demonstrate the ability to prepare a proper seedbed
☐☐☐☐ 08.05 Develop an overall plan for a lawn, protecting valuable natural features, to enhance property value

09.0 Maintaining Lawns

The student will be able to:

0 1 2 3

☐☐☐☐ 09.01 Describe how to properly water a lawn
☐☐☐☐ 09.02 Explain what happens when a newly seeded lawn has too much traffic
☐☐☐☐ 09.03 Describe the use of weed killers on a newly seeded lawn
☐☐☐☐ 09.04 Describe the mowing schedule of a newly seeded lawn
☐☐☐☐ 09.05 List the types of equipment for lawn mowing
☐☐☐☐ 09.06 Describe what each type of fertilizer does for a lawn
☐☐☐☐ 09.07 Develop a fertilizer schedule for a lawn
☐☐☐☐ 09.08 Identify common lawn problems
☐☐☐☐ 09.09 Select the qualities of a good and poor lawn
☐☐☐☐ 09.10 Demonstrate the ability to aerate a lawn
☐☐☐☐ 09.11 List the maintenance practices for lawns

10.0 Identification and Control of Turf Grass Pests

The student will be able to:

0 1 2 3

☐☐☐☐ 10.01 List the common diseases of turf grass
☐☐☐☐ 10.02 Describe the symptoms of various turf diseases
☐☐☐☐ 10.03 List the preventative management practices to avoid turf grass diseases
☐☐☐☐ 10.04 Identify the common insect pests harmful to lawns
☐☐☐☐ 10.05 Identify the common lawn diseases

0 1 2 3

☐☐☐☐ 10.06 Match the damage to the lawn with the pest responsible
☐☐☐☐ 10.07 Match the pests with the control measures for each
☐☐☐☐ 10.08 List the reasons for controlling weeds in lawns
☐☐☐☐ 10.09 Identify the common turf grasses used in the northwest and their specific area of advantage
☐☐☐☐ 10.10 List the management practice used in controlling lawn weeds

11.0 Pot Chrysanthemum Production

The student will be able to:

0 1 2 3

☐☐☐☐ 11.01 Name four holidays when chrysanthemums are in demand
☐☐☐☐ 11.02 Match the description of the bloom characteristics with the proper term
☐☐☐☐ 11.03 Explain the term "week group" and their importance in mum production
☐☐☐☐ 11.04 Describe how to promote vegetative growth throughout the year
☐☐☐☐ 11.05 Describe how to promote flower bud initiation throughout the year
☐☐☐☐ 11.06 List the proper steps for potting chrysanthemums
☐☐☐☐ 11.07 List the recommended temperature periods for producing high quality chrysanthemums
☐☐☐☐ 11.08 Explain the proper watering practices for chrysanthemums at various stages of growth
☐☐☐☐ 11.09 Recommend a fertilizer schedule for potted mums
☐☐☐☐ 11.10 Identify as true or false statements regarding pinching and disbudding
☐☐☐☐ 11.11 Describe the best stage of growth for selling mums
☐☐☐☐ 11.12 Demonstrate the ability to properly pot mums

12.0 Poinsettia Production

The student will be able to:

0 1 2 3

☐☐☐☐ 12.01 Match terms and definitions associated with poinsettia production
☐☐☐☐ 12.02 List the factors to coincide when choosing a poinsettia cultivar
☐☐☐☐ 12.03 Name the popular varieties of poinsettias
☐☐☐☐ 12.04 List the lighting schedule for producing a poinsettia crop to be sold on December 15
☐☐☐☐ 12.05 Describe how to pot up poinsettia cuttings
☐☐☐☐ 12.06 Demonstrate the ability to pot up poinsettia cuttings
☐☐☐☐ 12.07 Explain the differences between automatic, semi-automatic and hand watering of poinsettias

0 1 2 3

☐☐☐☐ 12.08 Recommend a fertilizer schedule for poinsettias
☐☐☐☐ 12.09 Select true statements regarding temperature effects on poinsettias
☐☐☐☐ 12.10 List the types of pinches and when they should be performed
☐☐☐☐ 12.11 Explain how to control the height of poinsettias through the use of chemical growth retardants
☐☐☐☐ 12.12 List the proper packing and shipping practices for poinsettias
☐☐☐☐ 12.13 List the directions for home care of poinsettia plants

13.0 Easter Lily Production

The student will be able to:

0 1 2 3

☐☐☐☐ 13.01 List the lily cultivars that are used for forcing
☐☐☐☐ 13.02 List the proper steps in propagating lilies
☐☐☐☐ 13.03 Describe the relationship between bulb size and flower county
☐☐☐☐ 13.04 Explain the reason for pre-cooling bulbs and determine the proper cooling schedule for Easter lilies
☐☐☐☐ 13.05 Describe the proper soil mix for lilies
☐☐☐☐ 13.06 List the steps in planting a bulb
☐☐☐☐ 13.07 Develop a fertilizer schedule for Easter lilies
☐☐☐☐ 13.08 Explain the proper watering practices for lilies
☐☐☐☐ 13.09 Select factors affecting the timing of a lily crop
☐☐☐☐ 13.10 Describe what happens to the lily stem under greenhouse conditions and how to correct this problem
☐☐☐☐ 13.11 List the steps that can be taken to control the height of Easter lilies
☐☐☐☐ 13.12 Explain the proper packing and shipping practices for both cut and potted lilies
☐☐☐☐ 13.13 Demonstrate the ability to properly pot lily bulbs

14.0 Floral Design

The student will be able to:

0 1 2 3

☐☐☐☐ 14.01 Match terms and definitions associated with floral design
☐☐☐☐ 14.02 List the types of containers which can be used in floral design
☐☐☐☐ 14.03 Select basic materials that are normally used for fresh flower arrangements
☐☐☐☐ 14.04 Select basic materials normally used for dried or silk flower arrangements
☐☐☐☐ 14.05 Discuss the proper use of color in floral design
☐☐☐☐ 14.06 List the basic color schemes used in floral design

0 1 2 3

☐☐☐☐ 14.07 Use a color wheel to determine combinations for various color schemes
☐☐☐☐ 14.08 Discuss the concepts of form, line, space, texture, and color
☐☐☐☐ 14.09 Discuss the use of symmetry and balance in an arrangement
☐☐☐☐ 14.10 List the sequence of procedure of planning a design
☐☐☐☐ 14.11 Select the types of floral designs
☐☐☐☐ 14.12 Explain the use of decorative accessories in floral designs
☐☐☐☐ 14.13 List the plant materials commonly used in floral arrangements and how to procure the materials
☐☐☐☐ 14.14 Demonstrate the ability to develop various types of floral arrangements for retail sale, based on cost of materials and labor
☐☐☐☐ 14.15 Demonstrate the ability to develop arrangements based on special themes, such as birthday, holiday, or anniversary
☐☐☐☐ 14.16 Evaluate flowers and potted plants for quality
☐☐☐☐ 14.17 Discuss storing and caring for cut flowers
☐☐☐☐ 14.18 Identify tools and equipment used in floral design

15.0 Hydroponics

The student will be able to:

0 1 2 3

☐☐☐☐ 15.01 Match terms and definitions associated with hydroponics
☐☐☐☐ 15.02 Select factors involved in growing plants hydroponically
☐☐☐☐ 15.03 List the types of media used in hydroponic gardening
☐☐☐☐ 15.04 Describe how to properly apply water to the media
☐☐☐☐ 15.05 List the advantages and disadvantages of several hydroponic watering systems
☐☐☐☐ 15.06 List the major, minor, and trace elements in a nutrient solution
☐☐☐☐ 15.07 Demonstrate the ability to make stock solutions of nutrients
☐☐☐☐ 15.08 Describe the insect and disease problems pertaining to hydroponics
☐☐☐☐ 15.09 Identify the proper temperatures and humidities for hydroponics
☐☐☐☐ 15.10 Select materials used in the construction of a hydroponic system

16.0 Gardening

The student will be able to:

0 1 2 3

☐☐☐☐ 16.01 Locate a desirable garden site at home
☐☐☐☐ 16.02 Determine the size of garden a family of four would need
☐☐☐☐ 16.03 Plan a garden layout based on suggested planting groups

0 1 2 3

☐☐☐☐ 16.04 Select vegetable varieties based on family preference, geographies, and vegetable seed availability
☐☐☐☐ 16.05 Estimate cost and return of a home garden
☐☐☐☐ 16.06 Determine the proper time to prepare garden soil for crops
☐☐☐☐ 16.07 Demonstrate the ability to prepare garden soil with usual cultural practices
☐☐☐☐ 16.08 Demonstrate the ability to properly plant a garden
☐☐☐☐ 16.09 Demonstrate the ability to transplant vegetables from flats and hot beds
☐☐☐☐ 16.10 List proper garden irrigation methods
☐☐☐☐ 16.11 List the common garden fertilization methods

17.0 Horticulture Tools, Equipment, and Machinery

The student will be able to:

0 1 2 3

☐☐☐☐ 17.01 Match terms and definitions associated with horticulture tools
☐☐☐☐ 17.02 List the general rules for choosing garden toots
☐☐☐☐ 17.03 List the kinds of shovels
☐☐☐☐ 17.04 Name the kinds of hoes
☐☐☐☐ 17.05 Identify as true or false statements about hoes
☐☐☐☐ 17.06 List the kinds of shears
☐☐☐☐ 17.07 Name the kinds of spading forks and two uses of each
☐☐☐☐ 17.08 List some special tools used in horticulture
☐☐☐☐ 17.09 Select preventive maintenance techniques for horticulture tools
☐☐☐☐ 17.10 List the kinds of equipment used in horticulture and landscaping
☐☐☐☐ 17.11 Name the tractor implements used in horticulture applications

18.0 Electrical Controls and Sensing Devices

The student will be able to:

0 1 2 3

☐☐☐☐ 18.01 Identify types of controls by nomenclature and use, including thermostats, humidistats, photoelectric cells magnetic relays, timers, pressure switches, and time delay equipment
☐☐☐☐ 18.02 Set controls such as timers and switches, for the desired performance
☐☐☐☐ 18.03 Use low voltage electrical control equipment
☐☐☐☐ 18.04 Interpret wiring diagrams
☐☐☐☐ 18.05 Select controls for electric motors from supply catalogs
☐☐☐☐ 18.06 Connect, start, and stop magnetic motor controllers

0 1 2 3

☐☐☐☐ 18.07 Install a timer circuit
☐☐☐☐ 18.08 Install a thermal delay relay control
☐☐☐☐ 18.09 Install a low voltage motor control system
☐☐☐☐ 18.10 Install switch control for staring 115 & 230 volt motors
☐☐☐☐ 18.11 Install a sensing device such as thermostat, humidistat, photoelectric cell, etc.

19.0 Salesmanship

The student will be able to:

0 1 2 3

☐☐☐☐ 19.01 Match terms and definitions associated with salesmanship
☐☐☐☐ 19.02 Describe how to be a service to the customer
☐☐☐☐ 19.03 Explain how to use persuasion in closing a sale
☐☐☐☐ 19.04 Discuss the necessity to educate the customer before proceeding in the sales process
☐☐☐☐ 19.05 Discuss how vital sales are in the American system of economy
☐☐☐☐ 19.06 List the steps in making a sale