

Student's Name _____

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 Elementary Study of Soils

The student will be able to:

- 0 1 2 3
- 01.01 List the reasons that soils are important
- 01.02 Discuss the functions of soil as related to plant growth, development, and maintenance
- 01.03 Select factors that affect sod formation
- 01.04 List the four physical properties of soil
- 01.05 Identify soil particles according to size, and discuss what methods are used to determine soil texture
- 01.06 Identify five kinds of soil structure
- 01.07 Match terms indicating soil color and depth with their correct descriptions
- 01.08 Label an illustration showing the different layers of a soil profile
- 01.09 Discuss how acidity and alkalinity effect the soil and methods of correcting pH problems

02.0 Organic Matter

The student will be able to:

- 0 1 2 3
- 02.01 Match terms and definitions associated with organic matter
- 02.02 List the importance of organic matter to plant production
- 02.03 List the factors affecting the rate of organic matter decomposition
- 02.04 List the basic ways in which nutrients obtained from organic matter affect the soil
- 02.05 Identify the factors that cause the loss of organic matter from soil

0 1 2 3

- 02.06 Name the types of organic matter which can be applied to soil
- 02.07 List the purposes of mulches
- 02.08 Select the organic and inorganic mulches that are available
- 02.09 Select the factors to consider when choosing mulching material

03.0 Potting Soil and Media

The student will be able to:

0 1 2 3

- 03.01 List the reasons for variation in types of soils
- 03.02 Discuss how root zone affects the availability of plant nutrients
- 03.03 Select plants tolerant to various pH ranges
- 03.04 Test soils for pH levels
- 03.05 Develop a chart of planting media with the characteristics of each media
- 03.06 List several soil mixes identifying media data for each soil mix
- 03.07 Identify the correct fertilizers to add for various soil mixes
- 03.08 Sterilize a potting soil mix

04.0 Soil Fertility

The student will be able to:

0 1 2 3

- 04.01 List the primary and secondary plant nutrients and describe the function of each for plant growth
- 04.02 Match nutrients to their correct plant deficiency symptoms
- 04.03 Select from a list factors that influence the use of fertilizers

0 1 2 3

- 04.04 List four sources of plant nutrients
- 04.05 Match dry, liquid, and gaseous fertilizers with their correct description and use
- 04.06 Calculate problems comparing fertilizer cost by comparing cost per pound of nutrients
- 04.07 Discuss methods and procedures involved in collecting a representative soil sample
- 04.08 Complete a soils test report form, and make fertilizer recommendations using the test analysis data
- 04.09 Identify and discuss methods of fertilizer application

05.0 Organic Fertilizers

The student will be able to:

0 1 2 3

- 05.01 Match terms and definitions associated with organic fertilizers
- 05.02 List sources of soil organic matter
- 05.03 Identify how the soil temperature, aeration, moisture, and reactions affect the rate of decomposition or organic matter
- 05.04 Discuss the value of humus and an organic fertilizers to soil fertility and plant growth
- 05.05 Describe how organic matter is produced
- 05.06 List the functions of growing a crop to produce organic matter
- 05.07 List the types of manures that can be produced
- 05.08 Select other sources of organic fertilizers
- 05.09 List the disadvantages of organic fertilizers
- 05.10 Demonstrate the ability to construct a compost pile

06.0 Basic Plant Processes

The student will be able to:

0 1 2 3

- 06.01 List the important plant processes in food manufacture and growth
- 06.02 Explain why photosynthesis is an important plant process
- 06.03 Explain the chemical process of photosynthesis
- 06.04 List factors that affect photosynthetic rate
- 06.05 Explain the chemical process of respiration
- 06.06 Distinguish between photosynthesis and respiration characteristics
- 06.07 Explain transpiration and fist factors that affect transpiration rate

0 1 2 3

- 06.08 Explain osmosis and the process of absorption by plant roots
- 06.09 Label the parts of a common plant cell and describe the function of each part

07.0 Plant Growth and Development

The student will be able to:

0 1 2 3

- 07.01 List the stages of plant growth and development
- 07.02 List requirements for good seed germination
- 07.03 List factors that cause poor seed germination
- 07.04 List the primary parts of and functions of a plant
- 07.05 Identify two types of root systems
- 07.06 Label a drawing showing the parts of a plant stem
- 07.07 Match stem modifications with correct descriptive term
- 07.08 List conditions affecting the vegetative growth of crop plants
- 07.09 Discuss asexual and sexual reproduction in plants
- 07.10 Label a drawing showing the parts of a complete flower
- 07.11 Match types of flowers to the correct botanical description
- 07.12 List methods of pollination

08.0 Plant Growth Regulators

The student will be able to:

0 1 2 3

- 08.01 Match terms and definitions associated with plant growth regulators
- 08.02 List the environmental factors that influence plant growth
- 08.03 List the ways hormones influence plant growth
- 08.04 Select statements that describe the effects of photoperiod on plant growth
- 08.05 Name the photoperiod responses
- 08.06 Explain how plants respond to day length
- 08.07 Select statements that either describe how to shorten or lengthen the day for plants
- 08.08 List the techniques for physical control over plant growth
- 08.09 Identify as either true or false reasons for using chemical growth regulators
- 08.10 List the biological factors that affect plant growth
- 08.11 List the controllable plant growth processes
- 08.12 List the effects of chemicals on plant growth

0 1 2 3

- 08.13 Identify the effects of growth regulators on plants
- 08.14 List the important chemical growth regulators groups
- 08.15 Describe statements as true or false as they relate to how auxins, gibberellins, kinins, dormins, or ethylenes affect plant growth and development
- 08.16 Select statements that describe plant responses attributed to auxins
- 08.17 List the uses of auxins
- 08.18 List the important commercial uses for plant growth regulators

09.0 Seed Selection

The student will be able to:

0 1 2 3

- 09.01 List factors to consider in selecting high quality seed
- 09.02 Discuss conditions that exist when good seed is not selected
- 09.03 List and describe the certifiable seed classes
- 09.04 List information required on certified seed tags
- 09.05 Discuss types and purposes of seed treatments
- 09.06 Discuss procedures to follow in handling and storing seed
- 09.07 Calculate the value of pure live seed

10.0 Seeding in Flats

The student will be able to:

0 1 2 3

- 10.01 Match terms and definitions associated with seeding in flats
- 10.02 List the materials from which flats can be made
- 10.03 List the advantages and disadvantages of using flats for propagating
- 10.04 List the advantages and disadvantages of starting seedlings inside flats
- 10.05 List the steps for seeding in flats
- 10.06 List the information that should appear on the label of a flat after it has been planted
- 10.07 Describe the procedure to follow after seeds have germinated in a flat
- 10.08 Demonstrate the ability to build a flat and plant seeds in it

11.0 Care and Transplanting of Seedlings

The student will be able to:

0 1 2 3

- 11.01 Match terms and definitions associated with care and transplanting of seedlings
- 11.02 Describe how to care for young seedlings
- 11.03 List the types of transplanting pots that are available
- 11.04 List the factors to consider when choosing plant containers
- 11.05 Describe the procedures to follow when transplanting seedlings
- 11.06 List the steps of transplanting seedlings
- 11.07 Describe how to harden seedlings
- 11.08 Demonstrate the ability to transplant seedlings properly

12.0 Introduction to Asexual Plant Propagation

The student will be able to:

0 1 2 3

- 12.01 Match terms and definitions relating to asexual plant propagation
- 12.02 List the methods of asexual plant propagation
- 12.03 List the reasons for using asexual propagation
- 12.04 Select cuttings that require leaves and cuttings that do not require leaves
- 12.05 List the main types of propagating by layering and the requirements for layering
- 12.06 Describe propagation by division
- 12.07 List the methods of propagating by budding
- 12.08 List the methods of grafting

13.0 Propagation by Cuttings

The student will be able to:

0 1 2 3

- 13.01 Match terms and definitions associated with propagation by cuttings
- 13.02 List treatments made to cuttings before placing them in rooting media
- 13.03 List the basic kinds of plant wounding
- 13.04 Explain the use of hormone treatment on cuttings
- 13.05 Describe why storage and callusing are used with hardwood cuttings
- 13.06 Demonstrate the ability to make various types of wounds on cuttings
- 13.07 Demonstrate how to treat a cutting with hormone

0 1 2 3

- 13.08 Demonstrate the ability to store and callus plant cuttings
- 13.09 Demonstrate the propagation of a coleus stem cutting
- 13.10 Demonstrate a leaf bud cutting
- 13.11 Demonstrate a root cutting

14.0 Propagation by Layering and Division

The student will be able to:

0 1 2 3

- 14.01 List the advantages and disadvantages of propagation by layering
- 14.02 List the types of layering
- 14.03 Identify the steps in transplanting layering plants
- 14.04 Demonstrate how to propagate by tip, simple, and air layering
- 14.05 Name the types of plants propagated by division
- 14.06 List the steps in divisional propagation
- 14.07 Demonstrate propagation by division of perennial and bulbous plants

15.0 Propagation by Budding

The student will be able to:

0 1 2 3

- 15.01 Match terms and definitions associated with propagation by budding
- 15.02 List the types of budding
- 15.03 List the techniques used when propagating by budding
- 15.04 List the precautions to be used with T-budding
- 15.05 Describe patch budding and list the variations of patch budding
- 15.06 Demonstrate the ability to T-bud and patch bud

16.0 Propagation by Grafting

The student will be able to:

0 1 2 3

- 16.01 Match terms and definitions associated with propagation by grafting
- 16.02 List the reasons for using grafting
- 16.03 Discuss the limitations of using grafting
- 16.04 List the sequence of making a union graft
- 16.05 List the functions of the callus tissue
- 16.06 List the types of grafting that are used when the diameter of the stock and scion are similar, and when the diameter of the stock is greater than the scion

0 1 2 3

- 16.07 Describe the qualities of a grafting wax
- 16.08 List the basic functions of grafting wax
- 16.09 List the basic kinds of grafting waxes
- 16.10 Demonstrate the ability to perform the basic types of plant grafts

17.0 Plant Identification

The student will be able to:

0 1 2 3

- 17.01 Discuss the system of plant classification
- 17.02 Identify the parts of simple and compound leaves
- 17.03 Name the types of leaf arrangement, venation and margins
- 17.04 Identify the types of leaf attachment to the stem
- 17.05 Identify the parts of a stem
- 17.06 Match stem modifications with their correct description
- 17.07 Identify the parts of a perfect flower
- 17.08 Identify the types of inflorescence
- 17.09 Identify common plants of economic impact to Idaho

18.0 Plant Pests

The student will be able to:

0 1 2 3

- 18.01 Match terms and definitions associated with plant pests
- 18.02 List the basic methods of weed control
- 18.03 Discuss weed competition and losses caused by weeds
- 18.04 Discuss how weeds spread
- 18.05 Discuss methods of cultural, mechanical, chemical and biological weed control
- 18.06 Identify the factors of a weed control program
- 18.07 Select statements as they apply to non-selective and selective herbicide compounds
- 18.08 Identify as true or false statements relating to pre-emergence and post-emergence weed control treatments
- 18.09 List ways that insects cause losses in plants
- 18.10 List beneficial effects of insects
- 18.11 Identify the three regions of an insect body
- 18.12 Match the way an insect feeds on plants with the correct description
- 18.13 Label drawings showing the life cycles of various insects
- 18.14 Discuss the importance of economics in relation to plant insect control

0 1 2 3

- 18.15 Select from a list cultural, biological, and chemical control practices for insects
- 18.16 Match classifications of insecticides to their correct description
- 18.17 Identify the insects having an economic impact on Idaho agriculture

19.0 Plant Disease Identification and Control

The student will be able to:

0 1 2 3

- 19.01 Identify by name, symptoms, and causal agents of diseases of that have economic impact on Idaho crops
- 19.02 Describe the life cycles of diseases
- 19.03 Describe the ways and means diseases are spread
- 19.04 Describe growing conditions and cultural practices favorable to common diseases
- 19.05 Describe preventative measures for diseases
- 19.06 Describe cultural and chemical control measures for diseases