

# Horticulture for the Workplace I

## EXPLORING THE HORTICULTURE INDUSTRY **A**

### 1 Lesson 1—Understanding Horticulture **A.1**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Define horticulture and describe its relationship to science and technology. **A.1.1**
- 2 Identify the three major segments of the horticulture industry. **A.1.2**
- 3 Identify and define activities included in the ornamental horticulture industry. **A.1.3**

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### 2 Lesson 2—Exploring Career Opportunities in Horticulture **A.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 List skills you should have to ensure success in a horticulture career. **A.2.1**
- 2 Explain how to prepare for a horticulture career. **A.2.2**
- 3 List examples of horticulture jobs and careers. **A.2.3**
- 4 Prepare a professional job resume for a horticulture job. **A.2.4**
- 5 Demonstrate the ability to successfully complete a job interview. **A.2.5**
- 6 Identify proper interpersonal skills that should be demonstrated while working on a job in the horticulture industry. **A.2.6**

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## EMPLOYABILITY IN THE AGRICULTURE INDUSTRY **B**

### 1 Lesson 1—Developing Goals **B.1**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the process of goal setting. **B.1.1**
- 2 Describe the terms and types of goals. **B.1.2**
- 3 Explain seven aspects of effective goals. **B.1.3**

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### 2 Lesson 2—Obtaining Education for a Job **B.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the benefits of education. B.2.1
  - 2 Describe the different levels of formal education. B.2.2
  - 3 Explain continuing education and its importance. B.2.3
  - 4 Identify sources of education for a job. B.2.4
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### **3 Lesson 3—Finding a Job** B.3

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe information sources for job opportunities. B.3.1
  - 2 Develop a system to evaluate job openings. B.3.2
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### **4 Lesson 4—Applying For a Job** B.4

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain how to research a job opportunity. B.4.1
  - 2 Describe two methods of applying for a job. B.4.2
  - 3 Identify the common types of information requested on a job application form. B.4.3
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### **5 Lesson 5—Writing a Resume and Letter of Application** B.5

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the purpose of a résumé. B.5.1
  - 2 List the main items that should be included in a résumé. B.5.2
  - 3 Describe the purpose of a letter of application and its primary elements. B.5.3
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### **6 Lesson 6—Succeeding in a Job Interview** B.6

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Define a job interview and explain its purpose. B.6.1
  - 2 Explain some tips for making a good impression in a job interview. B.6.2
  - 3 Describe what an applicant can learn from being denied a job opening. B.6.3
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Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain how, when, and why the FFA was organized. **C.1.1**
  - 2 Explain the mission and strategies, colors, motto, parts of the emblem, and the organizational structure of the FFA. **C.1.2**
  - 3 Recite and explain the meaning of the FFA Creed. **C.1.3**
  - 4 Explain the purpose of a Program of Activities and its committee structure. **C.1.4**
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## **2 Lesson 2—Discovering Opportunities in FFA** **C.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe how the FFA develops leadership skills, personal growth, and career success. **C.2.1**
  - 2 Identify major state and national activities available to FFA members. **C.2.2**
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## **3 Lesson 3—Understanding FFA Officer Duties and Responsibilities** **C.3**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the duties and responsibilities of chapter FFA officers. **C.3.1**
  - 2 Explain the proper dress and characteristics of a good FFA leader. **C.3.2**
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## **4 Lesson 4—Planning and Organizing an FFA Meeting** **C.4**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain how to plan a meeting and develop the order of business. **C.4.1**
  - 2 Describe how to set up the meeting room. **C.4.2**
  - 3 Explain the parliamentary procedure used in an FFA meeting. **C.4.3**
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## **5 Lesson 5—Determining the Benefits of an SAE** **C.5**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the importance of goals and career ladders. **C.5.1**
  - 2 Define supervised agricultural experience. **C.5.2**
  - 3 Explain the benefits of supervised agricultural experience programs. **C.5.3**
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## **6 Lesson 6—Determining the Kinds of SAE** **C.6**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the difference between entrepreneurship and placement SAE's. **C.6.1**
  - 2 Describe research and experimentation SAE's and exploratory SAE's. **C.6.2**
  - 3 Explain the characteristics of a good SAE program and student responsibilities. **C.6.3**
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## **7 Lesson 7—Researching Possible SAE Programs** **C.7**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify career interest areas in agriculture. **C.7.1**
  - 2 Identify skills needed for career success. **C.7.2**
  - 3 Explain opportunities for SAE programs. **C.7.3**
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## **8 Lesson 8—Planning Your SAE Programs** **C.8**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the steps in planning an SAE Program. **C.8.1**
  - 2 Identify the parts of an annual SAE program plan. **C.8.2**
  - 3 Discuss the function of a training plan and/or agreement in an SAE program **C.8.3**
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## **9 Lesson 9—Implementing SAE Programs** **C.9**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Discuss the importance of keeping records on an SAE program. **C.9.1**
  - 2 Explain the types of financial records needed to support a chosen SAE program. **C.9.2**
  - 3 Identify standards to follow in keeping records on an SAE program. **C.9.3**
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## **10 Lesson 10—Keeping and Using SAE Records** **C.10**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain how SAE records are organized. **C.10.1**
  - 2 Identify the procedures to making entries in the SAE records. **C.10.2**
  - 3 Explain how to summarize and analyze the SAE records. **C.10.3**
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## **11 Lesson 11—Making Long Range Plans for Expanding SAE Programs** **C.11**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the factors that should be considered in expanding an SAE program. [C.11.1](#)
- 2 Explain how placement and ownership SAE programs may be expanded. [C.11.2](#)

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## **HORTICULTURAL MECHANICS, MACHINERY OPERATION AND MAINTENANCE** [D](#)

### **1 Lesson 1—Identify and properly use tools and equipment utilized in the horticulture industry** [D.1](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify hand and power tools used in the greenhouse, turf management and landscaping. [D.1.1](#)
- 2 Identify equipment and its uses of tools used in the greenhouse, turf management and landscaping. [D.1.2](#)
- 3 Demonstrate proper safety procedure for utilizing tools used in the greenhouse, turf management and landscaping. [D.1.3](#)
- 4 Demonstrate proper maintenance and storage procedures for tools used in the greenhouse, turf management and landscaping. [D.1.4](#)

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## **PLANT ANATOMY AND PHYSIOLOGY** [E](#)

### **1 Lesson 1—Classify ornamental plants** [E.1](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the system used for naming and classifying plants. [E.1.1](#)
- 2 Identify the major groups of plants. [E.1.2](#)
- 3 Describe the differences between annuals, biennials, and perennials. [E.1.3](#)

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### **2 Lesson 2—Understanding leaf anatomy and morphology** [C.2](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the main parts of a leaf. [C.2.1](#)
- 2 Describe some major types of leaves. [C.2.2](#)
- 3 Discuss common vein patterns found in leaves. [C.2.3](#)
- 4 Explain how a leaf is organized. [C.2.4](#)

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### **3 Lesson 3—Understanding stem anatomy** [C.3](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the functions of a stem. C.3.1
  - 2 Identify the external structures of a stem. C.3.2
  - 3 Identify the internal structures of a stem. C.3.3
  - 4 Distinguish between the different types of specialized stems. C.3.4
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#### **4 Lesson 4—Understanding root anatomy** C.4

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 List the functions of roots in plants. C.4.1
  - 2 Identify the parts of a root. C.4.2
  - 3 Identify the two major types of root systems. C.4.3
  - 4 Recognize a healthy root system. C.4.4
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#### **5 Lesson 5—Understanding flower anatomy** C.5

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the parts of a flower. C.5.1
  - 2 Explain the purpose of a flower. C.5.2
  - 3 List some different types of flowers. C.5.3
  - 4 Describe the difference between monocot and dicot flowers. C.5.4
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#### **6 Lesson 6—Understanding plant physiology** C.6

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the process of photosynthesis. C.6.1
  - 2 Describe the process of cellular respiration. C.6.2
  - 3 Explain why photosynthesis and respiration are important to us as human beings. C.6.3
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#### **7 Lesson 7—Understanding light, temperature, air and water effects on plant growth** C.7

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the effect of light on plants. C.7.1
- 2 Describe a plant's temperature needs. C.7.2
- 3 Explain how the quality of air affects plants. C.7.3
- 4 Describe a plant's water needs. C.7.4

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## **8 Lesson 8—Understanding plant growth regulators** C.8

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the work of plant growth regulators. C.8.1
  - 2 Explain the functions of several plant hormones. C.8.2
  - 3 List several commercial uses for plant growth regulators. C.8.3
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## **PLANT PROPAGATION** F

### **1 Lesson 1—Understanding sexual reproduction** F.1

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Discuss the importance of plant propagation. F.1.1
  - 2 Explain the difference between sexual and asexual propagation. F.1.2
  - 3 Identify the major parts of a seed. F.1.3
  - 4 List the function of each major part of a seed. F.1.4
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### **2 Lesson 2—Propagating plants sexually** F.2

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Discuss the importance of sexual propagation of plants. F.2.1
  - 2 Describe the process of seed germination. F.2.2
  - 3 Describe the factors involved in planting seeds for transplanting. F.2.3
  - 4 Explain how to successfully direct seed outdoors. F.2.4
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### **3 Lesson 3—Propagating plants by cuttings** F.3

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain why plants are propagated asexually. F.3.1
  - 2 Describe leaf and leaf-bud cuttings and how they are used to propagate plants. F.3.2
  - 3 Describe the three types of stem cuttings. F.3.3
  - 4 Explain how root cuttings are prepared for propagation. F.3.4
  - 5 Identify some of the environmental factors that determine the success of rooting of cuttings. F.3.5
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### **4 Lesson 4—Propagating plants by division, separation and layering** F.4

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the difference between separation and division in plant propagation. **F.4.1**
- 2 Describe layering and identify four common forms of layering. **F.4.2**

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#### **5 Lesson 5—Propagating plants by grafting and budding** **F.5**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe how grafting is used to propagate plants. **F.5.1**
- 2 Identify and explain the difference between three common methods of grafting. **F.5.2**
- 3 Explain how budding is used for plant propagation. **F.5.3**

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#### **6 Lesson 6—Propagating plants by tissue culture** **F.6**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Discuss the importance of tissue culture. **F.6.1**
- 2 Discuss a tissue culture method of propagation used in the greenhouse industry. **F.6.2**

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### **GROWING MEDIA, NUTRIENTS AND FERTILIZERS** **G**

#### **1 Lesson 1—Properties of growing media** **G.1**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the types of growing media. **G.1.1**
- 2 Describe the functions of growing media. **G.1.2**
- 3 Explain the relationship between growing media and plant growth **G.1.3**

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#### **2 Lesson 2—Growing media components** **G.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the components of soil. **G.2.1**
- 2 List the components of a soilless mix. **G.2.2**
- 3 Compare and contrast the use of soil versus a soilless mix. **G.2.3**

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#### **3 Lesson 3—Providing nutrients for a horticulture crop** **G.3**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Name the nutrients needed for plant growth. **G.3.1**
  - 2 Describe pH and how it is modified. **G.3.2**
  - 3 Describe the components of a fertilizer. **G.3.3**
  - 4 Explain the methods of applying fertilizers to horticulture crops. **G.3.4**
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#### **4 Lesson 4—Determining the Nature of Soil** **G.4**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain how the resources soil provides help in supporting life. **G.4.1**
  - 2 Explain the contents of soil. **G.4.2**
  - 3 Describe the biological nature of soil. **G.4.3**
  - 4 Describe the four ways plants use soil. **G.4.4**
  - 5 Describe some horticultural uses of soil. **G.4.5**
  - 6 Describe some non-horticultural uses of soil. **G.4.6**
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#### **5 Lesson 5—Understanding Soil Texture and Structure** **G.5**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the concept of soil texture and its importance. **G.5.1**
  - 2 Determine the texture of a soil sample. **G.5.2**
  - 3 Describe soil structure, its formation, and importance. **G.5.3**
  - 4 Identify various soil structures. **G.5.4**
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#### **6 Lesson 6—Explaining a Soil Profile** **G.6**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the soil profile. **G.6.1**
  - 2 Explain how soils within the profile change over time. **G.6.2**
  - 3 Distinguish between the major horizons of a soil profile. **G.6.3**
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#### **7 Lesson 7—Understanding Moisture Holding Capacity** **G.7**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain moisture holding capacity. **G.7.1**
  - 2 Explain what determines a soil's moisture holding capacity. **G.7.2**
  - 3 Determine the moisture holding capacity of a given soil profile. **G.7.3**
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#### **8 Lesson 8—Understanding Soil Degradation** **G.8**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe soil degradation. **G.8.1**
- 2 Explain how construction can result in soil degradation. **G.8.2**
- 3 Identify sources of contamination and explain how they result in soil degradation. **G.8.3**
- 4 Explain soil erosion and how it results in soil degradation. **G.8.4**
- 5 Identify other sources of soil degradation. **G.8.5**

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## **9 Lesson 9—Understanding Soil Erosion and Management Practices** **G.9**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain soil erosion. **G.9.1**
- 2 Identify the causes of soil erosion and steps in the erosion process. **G.9.2**
- 3 Explain the ways in which different types of wind erosion occur and the associated problems. **G.9.3**
- 4 Distinguish between the different types of water erosion. **G.9.4**
- 5 Identify urban management practices that reduce soil erosion. **G.9.5**
- 6 Identify horticultural management practices that will minimize soil erosion. **G.9.6**

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## **INTEGRATED PEST MANAGEMENT** **H**

### **1 Lesson 1—Understanding Integrated Pest Management** **H.1**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain integrated pest management. **H.1.1**
- 2 Explain best management practices. **H.1.2**
- 3 Identify the basic elements of an integrated pest management program. **H.1.3**

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### **2 Lesson 2—Determining the Kinds of Pesticides** **H.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain plant pests and how they cause losses. **H.2.1**
- 2 Identify the major classifications of pesticides and their use. **H.2.2**
- 3 Identify the major classifications of herbicides and their use. **H.2.3**
- 4 Identify the major classifications of insecticides and their use. **H.2.4**

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### **3 Lesson 3—Using Pesticides Safely** **H.3**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the way pesticides are classified according to toxicity. H.3.1
  - 2 Identify the types of pesticide exposure. H.3.2
  - 3 Explain how toxicity is measured. H.3.3
  - 4 Identify the safety practices that should be followed when applying pesticides. H.3.4
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#### **4 Lesson 4—Interpreting Pesticide Labels** H.4

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the purpose of the pesticide label. H.4.1
  - 2 Identify the information that should be included on the pesticide label. H.4.2
  - 3 Explain when the pesticide label should be read. H.4.3
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#### **5 Lesson 5—Applying Pesticides** H.5

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the categories of pesticides according to time of application. H.5.1
  - 2 Explain the different areas of application in applying pesticides. H.5.2
  - 3 Explain how to properly calibrate equipment used in applying pesticides. H.5.3
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#### **6 Lesson 6—Managing Environmental Impact of Pesticides** H.6

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the environmental concerns involved with pesticide use. H.6.1
  - 2 Explain pesticide persistence and its impact on the environment. H.6.2
  - 3 Explain proper disposal of surplus pesticides and empty containers. H.6.3
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#### **7 Lesson 7—Identifying and Managing Plant Pests in the Greenhouse** H.7

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the major categories of pests found in the greenhouse. H.7.1
  - 2 Discuss pest control techniques used in a greenhouse. H.7.2
  - 3 Describe the different practices of integrated pest management used in the greenhouse. H.7.3
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#### **8 Lesson 8—Identifying and Managing Plant Pests in the Landscape** H.8

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 List the major destructive plant insects in the landscape. **H.8.1**
  - 2 Describe plant disease control techniques used in the landscape. **H.8.2**
  - 3 Name weed control techniques used in landscape beds. **H.8.3**
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## **Greenhouse Structures** **I**

### **1 Lesson 1—Exploring Greenhouse Structures** **I.1**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify greenhouse designs. **I.1.1**
  - 2 Review considerations for greenhouse frameworks. **I.1.2**
  - 3 Identify and describe greenhouse glazing materials. **I.1.3**
  - 4 Describe the functions of the headhouse. **I.1.4**
  - 5 Discuss the advantages of retractable-roof greenhouses. **I.1.5**
  - 6 Describe greenhouse bench options. **I.1.6**
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### **2 Lesson 2—Controlling the Greenhouse Climate** **I.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe methods of heating greenhouse structures. **I.2.1**
  - 2 Explain major greenhouse cooling and ventilation systems. **I.2.2**
  - 3 Identify greenhouse climate control systems. **I.2.3**
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### **3 Lesson 3—Using Automated Systems in the Greenhouse** **I.3**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Discuss the advantages of automated systems. **I.3.1**
  - 2 Identify automated systems involved in planting. **I.3.2**
  - 3 Identify automated systems involved in moving plants in the greenhouse. **I.3.3**
  - 4 Identify automated systems involved in watering plants. **I.3.4**
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## **Producing a Greenhouse Crop** **J**

### **1 Lesson 1—PREPARATION OF SOILS AND PLANTING MEDIA** **J.1**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Gather a soil sample using recommended procedures. **J.1.1**
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### **2 Lesson 2—PROPAGATION AND PLANTING OF PLANTS** **J.2**

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify the varieties of flowering plants that are most profitably grown in the local community. J.2.1
- 2 Select and prepare a recommended media for a seed flat to germinate bedding plants. J.2.2
- 3 Demonstrate the ability to seed a flat or individual container using recommended procedures. J.2.3
- 4 Demonstrate the ability to plant bulbs using recommended procedures. J.2.4
- 5 Transplant seedlings or cuttings into selected sterile containers using recommended procedures. J.2.5
- 6 Plan and maintain a mist preparation system using time clocks and irrigation equipment. J.2.6
- 7 Select, prepare, take, and place cuttings using recommended procedures. J.2.7
- 8 Plant a selected crop of rooted cuttings using recommended procedures. J.2.8
- 9 Package and label plants for shipment. J.2.9

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### 3 Lesson 3—CULTURAL AND ENVIRONMENTAL CON-TROL PRACTICES J.3

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Demonstrate the ability to control and manage the growth of flowering plants by pinching, disbudding, or pruning according to recommended procedures. J.3.1
- 2 Apply growth regulating chemicals to plants using recommended procedures. J.3.2
- 3 Install a shade cloth to a shadehouse area using recommended procedures. J.3.3
- 4 Manipulate the temperature of a given greenhouse using air-conditioning, heaters, vents, or fans. J.3.4
- 5 Cultivate soils with a Rototiller using recommended practices. J.3.5
- 6 Aerate compacted soils using recommended procedures. J.3.6
- 7 Stake and tie flowering plants that require support using recommended procedures. J.3.7
- 8 Demonstrate the ability to repair broken pipes, sprinkler heads, mist heads, and/or valves using recommended procedures. J.3.8
- 9 Apply granular and liquid fertilizer to flower beds and floral crops at a preselected rate using recommended procedures. J.3.9

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### 4 Lesson 4—IRRIGATION PRACTICES J.4

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Plan and implement a watering schedule using an automatic irrigation system. [J.4.1](#)
  - 2 Demonstrate the ability to hand irrigate given plants using recommended procedures [J.4.2](#)
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## **5 Lesson 5—PLANT PEST AND DISEASE CONTROL** [J.5](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Demonstrate the ability to examine plants and recognize and report damage resulting from disease and insects. [J.5.1](#)
  - 2 Measure, mix, and apply a recommended chemical for control of a specific pest on floral crops. [J.5.2](#)
  - 3 Identify and remove diseased plants grown in beds, pots, or frames in the greenhouse or shadehouse. [J.5.3](#)
  - 4 Identify and manually remove weeds growing in potted plants or beds using recommended procedures. [J.5.4](#)
  - 5 Demonstrate the ability to clean spray equipment after use according to approved practices. [J.5.5](#)
  - 6 Repair and/or replace nonfunctional hoses, pipes, lines, or nozzles on spray equipment. [J.5.6](#)
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## **6 Lesson 6—PACKAGING, STORAGE, AND SHIPMENT OF POTTED FLOWERS AND FOLIAGE PLANTS** [J.6](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify and remove dead or diseased plant parts from potted plants or other floriculture specimens grown for market. [J.6.1](#)
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## **7 Lesson 7—MISCELLANEOUS EQUIPMENT MAINTENANCE AND REPAIR** [J.7](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Oil electric motors according to specifications listed in the operator's manual. [J.7.1](#)
  - 2 Replace or repair plastic or polyethylene covers for a greenhouse using recommended procedures. [J.7.2](#)
  - 3 Repair or replace valves on irrigation systems using galvanized or PVC plastic pipe according to recommended procedures. [J.7.3](#)
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## **8 Lesson 8—Growing Potted Perennials** [J.8](#)

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the importance and scope of perennials. J.8.1
- 2 Discuss the factors involved in propagating perennials. J.8.2
- 3 Explain production practices used in forcing perennial plants to flower. J.8.3

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## **Greenhouse Business Management** K

### **1 Lesson 1—Managing the Greenhouse Business** K.1

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Identify types of greenhouse businesses. K.1.1
- 2 Recognize costs related to production. K.1.2
- 3 Develop and implement a marketing strategy. K.1.3
- 4 Describe career opportunities associated with greenhouse management. K.1.4

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## **Nursery Production** L

### **1 Lesson 1—Understanding Nursery Production Facilities** L.1

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Explain the scope and history of the Nursery Industry. L.1.1
- 2 Describe the different types of nurseries. L.1.2
- 3 Explain the economic factors involved in selecting a nursery site. L.1.3
- 4 Explain the environmental factors involved in selecting a nursery site. L.1.4
- 5 Describe the different types of nursery facilities. L.1.5
- 6 Explain how a plant hardiness map is used. L.1.6

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### **2 Lesson 2—Producing Nursery Crops** L.2

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the process of lining out nursery stock. L.2.1
- 2 List and describe the proper nursery field practices. L.2.2
- 3 Describe sample field practice schedules for different types of plants. L.2.3
- 4 Describe the common pests and problems of field nursery stock. L.2.4
- 5 Describe the process of properly staking a tree in the field. L.2.5
- 6 Describe the tools and equipment used in production. L.2.6

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### **3 Lesson 3—Packaging Nursery Crops** L.3

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the three types of packaging of nursery crops. L.3.1
  - 2 Describe how to ball and burlap (B&B) stock properly. L.3.2
  - 3 Explain the advantages and disadvantages of B&B, container, and bare root. L.3.3
  - 4 Describe the types of storage used for nursery stock. L.3.4
  - 5 Describe the techniques of defoliation of plants before storage. L.3.5
  - 6 List and describe the problems that might occur to plants in storage. L.3.6
  - 7 Describe the process of grading with calipers. L.3.7
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## Nursery Business Management M

### 1 Lesson 1—Managing the Nursery Business M.1

Student Learning Objective: Instruction in this lesson should result in students achieving the following objectives:

- 1 Describe the desirable work traits of a nursery worker. M.1.1
- 2 Describe common tasks performed by a nursery worker. M.1.2
- 3 Describe a common business organizational chart. M.1.3
- 4 Describe the types of business records kept by a nursery. M.1.4
- 5 Describe the ways nurseries advertise their stock. M.1.5