

General Horticulture and Plant Science (11.42000) (2013)

Demonstrate employability skills required by business and industry. AFNR - GHPS - 1

1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. AFNR - GHPS - 1.2

1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. AFNR - GHPS - 1.1

1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations AFNR - GHPS - 1.3

1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. AFNR - GHPS - 1.4

1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills. AFNR - GHPS - 1.5

1.6 Present a professional image through appearance, behavior and language. AFNR - GHPS - 1.6

Learns to work safely in the agriculture lab and work sites, demonstrates selected competencies in leadership through the FFA and agricultural industry organizations, and develops plans for a Supervised Agricultural Experience Program (SAEP). AFNR - GHPS - 2

2.1 Explain the role of the Agricultural Education program and the FFA in personal development. AFNR - GHPS - 2.1

2.2 Demonstrate knowledge learned through a SAEP. AFNR - GHPS - 2.2

2.3 Develop leadership and personal development skills through participation in the FFA AFNR - GHPS - 2.3

2.4 Explore career opportunities in horticulture-plant science through the FFA and Agricultural Education Program. AFNR - GHPS - 2.4

2.5 Explore the professional agricultural organizations associated with the course content. AFNR - GHPS - 2.5

Identify plant parts, growth, and reproduction processes. [AFNR-GHPS-3](#)

3.1 Compare and contrast the three phases of plant life (dormancy, vegetative, reproductive) [AFNR-GHPS-3.1](#)

3.2 Describe the difference between annuals, biennials, and perennials. [AFNR-GHPS-3.2](#)

3.3 Categorize vegetative structures and functions of plant parts (i.e....leaves, stems, roots). [AFNR-GHPS-3.3](#)

3.4 Sketch the sexual reproductive structures of plants and summarize their functions. (e.g., flower, fruit, seeds). [AFNR-GHPS-3.4](#)

3.5 Sketch the sexual reproductive structures of plants and summarize their functions. (e.g., stems, roots). [AFNR-GHPS-3.5](#)

Determine factors that affect plant development and growth. [AFNR-GHPS-4](#)

4.1 Describe the process of photosynthesis and investigate factors affecting photosynthesis in plants. [AFNR-GHPS-4.1](#)

4.2 Describe the process of respiration and investigate factors affecting respiration in plants [AFNR-GHPS-4.2](#)

4.3 Differentiate between the growth processes of plants (e.g., germination, photosynthesis, transpiration, respiration, osmosis). [AFNR-GHPS-4.3](#)

Discuss the importance of sexual reproduction in plants. [AFNR-GHPS-5](#)

5.1 Examine the importance of plant propagation [AFNR-GHPS-5.1](#)

5.2 Compare and contrast sexual and asexual propagation. [AFNR-GHPS-5.2](#)

5.3 Describe the factors involved in planting seeds and demonstrate proper planting methods. [AFNR-GHPS-5.3](#)

AFNR-GHPS-6 Discuss the importance of asexual reproduction in plants. [AFNR-GHPS-6](#)

6.1 Describe the various methods of vegetative propagation. [AFNR-GHPS-6.1](#)

6.2 Apply information learned to correctly demonstrate each method of vegetative propagation. [AFNR-GHPS-6.2](#)

Determine the basic principles and uses of soil and plant growth media [AFNR-GHPS-7](#)

7.1 Identify and sketch soil materials and structure. [AFNR-GHPS-7.1](#)

7.2 Evaluate the components and functions of a good growing media [AFNR-GHPS-7.2](#)

Identify macro, secondary and micro plant nutrients. [AFNR-GHPS-8](#)

8.1 List and discuss the nutrients needed for plant growth. [AFNR-GHPS-8.1](#)

8.2 Categorize common nutrient deficiency symptoms. [AFNR-GHPS-8.2](#)

8.3 Assess soil pH, analyze plant nutrient availability and discuss methods of pH modification [AFNR-GHPS-8.3](#)

Explore the use of plant fertilizers and proper fertilizing methods. [AFNR-GHPS-9](#)

9.1 Identify the components of a complete plant fertilizer. [AFNR-GHPS-9.1](#)

9.2 Analyze the difference between organic and inorganic fertilizers. [AFNR-GHPS-9.2](#)

9.3 Demonstrate proper technique for applying water soluble and granular fertilizers. [AFNR-GHPS-9.3](#)

9.4 Calculate accurate fertilizer ratios. [AFNR-GHPS-9.4](#)

Evaluate the damage caused to plants by insects, weeds, diseases, and physiological disorders. [AFNR-GHPS-10](#)

10.1 Identify common insects, weeds, diseases and physiological disorders. [AFNR-GHPS-10.1](#)

10.2 Diagram the external structure of an insect [AFNR-GHPS-10.2](#)

10.3 Illustrate the complete and incomplete life cycles of insects. [AFNR-GHPS-10.3](#)

10.4 Describe the damage inflicted by insects and weeds. [AFNR-GHPS-10.4](#)

10.5 Describe common plant diseases and compare and contrast solution methods [AFNR-GHPS-10.5](#)

10.6 Identify the proper methods of controlling pests. [AFNR-GHPS-10.6](#)

Compare and contrast the use of various plant growing containers. [AFNR-GHPS-11](#)

11.1 Describe the containers used in plant production. [AFNR-GHPS-11.1](#)

11.2 Analyze the advantages and disadvantages of each type of plant growing container. [AFNR-GHPS-11.2](#)

Describe various plant irrigation methods. [AFNR-GHPS-12](#)

12.1 Explain the different types of watering methods for plants. [AFNR-GHPS-12.1](#)

12.2 Compare and contrast the advantages and disadvantages of each type of watering system. [AFNR-GHPS-12.2](#)

Explore plant science and horticulture careers and opportunities. [AFNR-GHPS-13](#)

13.1 Exhibit critical thinking and problem solving skills in career planning in various plant science careers. [AFNR-GHPS-13.1](#)

13.2 Analyze skills, education requirements, income, and advantages and disadvantages of careers in the plant science industry. [AFNR-GHPS-13.2](#)