

## AE.HO1 Horticulture I

### Essential Discipline Goals

- Develop knowledge of the Horticulture Industry and its relevance to the individual and society. Develop and apply, through horticulture experience and examples, creative thinking and problem solving skills.
  - Acquire and apply knowledge of the concepts, theories, principles and laws of science to interpret the world of horticulture.
- Utilize horticulture experiences in the planning and fulfillment of personal aspirations and career decisions.
- Develop a basic knowledge of the language used to interpret the fundamentals and applications of horticulture.

#### **Standard**

#### **Indicators**

**AE.HO1.05** Demonstrate the safe use of tools and equipment in the lab and greenhouse. 1.3.2

**AE.HO1.05.01** Identify the following: 1.3.4

**AE.HO1.05.02** Laboratory and the greenhouse safety procedures 1.3.2

**AE.HO1.05.03** Laboratory and greenhouse safety equipment 1.3.4

**AE.HO1.05.04** Accident reporting procedures 1.3.2

**AE.HO1.05.05** Procedures for handling and storing hazardous materials 1.3.3

**AE.HO1.10** Demonstrate understanding of the purpose of the FFA and student organizations

**AE.HO1.10.01** Explain the aims and purpose of the FFA

**AE.HO1.15** Identify career opportunities in the horticulture industry 1.7.5

**AE.HO1.15.01** Describe career opportunities in horticulture 1.7.5

**AE.HO1.15.02** Identify and list skills necessary for a career in horticulture 1.7.5

**AE.HO1.20** Identify the parts of plants and their functions 3.2.1

**AE.HO1.20.01** Identify the parts of a plant 3.2.1

**AE.HO1.20.02** Describe the major functions of roots, stems, leaves, and flowers 3.2.1

**AE.HO1.20.03** Explain the photosynthesis process in plants 3.1.3

**AE.HO1.20.04** Identify the functions of air, water, light, and soil in relation to plant growth 3.1.3, 3.2.1

**AE.HO1.20.05** Trace the movement of minerals, water, and nutrients in plants 3.2.1

**AE.HO1.20.06** Grow and observe plants to determine how fertilizers and/or nutrients affect plants growth 3.2.2

**AE.HO1.25** Develop an understanding of plant taxonomy 1.5.7

**AE.HO1.25.01** Describe the taxonomic features used to identify plants 1.5.7

**AE.HO1.25.02** Describe how the binomial naming system is used to name plants 1.5.7

**AE.HO1.25.03** Identify common flowering and foliage plants used in the greenhouse and floral design industries 1.5.7

**AE.HO1.25.04** Identify trees, flowers and shrubs native to this area 1.5.7

**AE.HO1.30** Identify the principles and practices used in flower and vegetable gardening 3.5.1

**AE.HO1.30.01** Identify common flower and vegetable crops 1.5.7

**AE.HO1.30.02** Identify the cultural needs of flower and vegetable crops 3.5.1

**AE.HO1.30.03** Develop a garden plan for flower and/or vegetable garden 1.5.4

**AE.HO1.35** Demonstrate knowledge of plant propagation techniques as they relate to plant production 3.2.1

**AE.HO1.35.01** Identify the methods of plant propagation 3.2.1

**AE.HO1.35.02** Demonstrate various methods of asexual propagation of plants 3.2.1

**AE.HO1.35.03** Identify the parts of a flower and list their functions 3.2.1

**AE.HO1.35.04** Plant seeds and provide proper cultural conditions to produce a crop 1.3.1

**AE.HO1.40** Demonstrate knowledge of floral design principles and techniques

**AE.HO1.40.01** Demonstrate a knowledge of the history of floral design

**AE.HO1.40.02** Identify the basic flower arrangement forms

**AE.HO1.40.03** Identify the basic principles of floral design

**AE.HO1.40.04** Identify floral design supplies

- AE.HO1.40.05** Identify the flowers and greens used in floral design
- AE.HO1.40.06** Demonstrate flower cutting techniques
- AE.HO1.40.07** Identify materials used in corsage and boutonniere construction
- AE.HO1.40.08** Demonstrate how to make floral arrangements, corsages, boutonnieres and seasonal arrangements
- AE.HO1.45** Develop an understanding of how soils are important to plant growth 3.5.1
  - AE.HO1.45.01** Identify the components of soil 3.5.1
  - AE.HO1.45.02** Diagram a soil profile 3.5.1
  - AE.HO1.45.03** Demonstrate how to conduct a soil test on soil samples 1.3.1
- AE.HO1.50** Identify emerging technologies in plant production 1.7.6
  - AE.HO1.50.01** Demonstrate an understanding of the principles of hydroponics 1.7.6
  - AE.HO1.50.02** Develop a model unit that produces a plant crop utilizing hydroponic technology 1.7.6
- AE.HO1.55** Demonstrate knowledge of the principles and practices used in turf and landscaping maintenance 1.5.7
  - AE.HO1.55.01** Identify the functions of turf grasses and landscape plant 1.5.7
  - AE.HO1.55.02** Identify landscape plants and turf grasses 1.5.7
  - AE.HO1.55.03** Demonstrate the safe use of equipment used in landscaping and turf maintenance 1.3.1
- AE.HO1.60** Identify the cultural requirements for production of plants in the greenhouse 1.3.1
  - AE.HO1.60.01** Identify various types of greenhouse growing structures and their characteristics 1.3.4
  - AE.HO1.60.02** Identify and explain greenhouse heating and cooling 1.5.7