

Unit A: Understanding Horticulture

Lesson 1: Exploring the Horticulture Industry

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

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

Recommended Teaching Time: 1 hour

Recommended Resources: The following resources may be useful in teaching this lesson:

1. A PowerPoint has also been developed for use with this lesson plan
2. http://afghanistanhorticulture.org/Nursery_Survey.aspx
3. <http://www.cals.wisc.edu/students/majors/Horticulture.php>

List of Equipment, Tools, Supplies, and Facilities:

Writing surface
PowerPoint Projector
PowerPoint Slides
Transparency Masters
Lab Sheet
Horticulture Magazines

Terms: The following terms are presented in this lesson (shown in bold italics and on PowerPoint Slide 2):

- Botany
- Floriculture
- Foliage plants
- Horticulture
- Horticulture industry
- Horticultural science
- Horticulture technology
- Landscape horticulture
- Nursery
- Olericulture
- Ornamental horticulture
- Pomology

Interest Approach: Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

If materials are available, begin the lesson by having students look through available horticultural magazines. After giving them several minutes, ask what they think horticulture is and how they think it relates to their idea of agriculture.

Expect a variety of responses. Follow up the responses with the correct definition and an explanation of the relationship. Continue with the lesson.

Summary of Content and Teaching Strategies

Objective 1: Define horticulture and describe its relationship to science and technology.

(PowerPoint Slide 3)

- I. Horticulture involves more than just a beautiful landscape or a bouquet of flowers. **Horticulture** is the culture of plants for food, comfort, and beautification purposes.

(PowerPoint Slide 4)

In Latin, the term horticulture means “garden culture.” However, advancements in horticulture science and technology have helped the field of horticulture become more than just garden culture.

(PowerPoint Slide 5)

- A. There is a definite relationship between horticulture and science. The field of science that deals with the cultivation of horticultural plants is known as **horticultural science**. Botany is the major scientific area most closely related to horticulture. **Botany** is the study of plants and their processes.

(PowerPoint Slide 6)

- B. As in other areas of agriculture, technology has found its way into horticulture. **Horticulture technology** is the application of science to horticulture. Successfully raising horticultural plants takes more than just a daily watering.

(PowerPoint Slide 7)

Time, patience, and an understanding of the scientific processes of plants is needed to grow beautiful plants and flowers.

(PowerPoint Slide 8)

- C. The **horticulture industry** is the combination of scientific, technological, and production activities that insure the satisfaction of the consumer.

****You can quiz the class by reading them the definition of the terms you have just covered. Call on people randomly to give you the answer. You can repeat the terms as many times as you would like. Do this until you feel everyone has a good understanding of the information. TM: A1-1 highlights the definitions given.**

Objective 2: Identify the three major segments of the horticulture industry.

(PowerPoint Slide 9)

II. The horticulture industry can be divided into three areas. Each of these areas is unique and includes many career opportunities.

(PowerPoint Slide 10)

- A. The growth and use of plants for their beauty is the area of horticulture known as **ornamental horticulture**. Ornamental horticulture involves the production and use of flowering and foliage plants used both indoors and out.

(PowerPoint Slide 11)

- B. The area of horticulture that involves the production of vegetable food crops is olericulture. **Olericulture** includes the planting, harvesting, storing, processing, and marketing of vegetable crops Tomatoes, radishes, leek and lettuce are examples of vegetable crops.

(PowerPoint Slide 12)

- C. Another food crop production area of horticulture is pomology.

Pomology is the planting, harvesting, storing, processing, and marketing, of fruit and nut crops. Examples of fruit and nut crops include: apples, peaches, strawberries, almonds and walnuts.

****Have examples of horticulture products on display. This could include flowering and/or foliage plants from the greenhouse, fruits, nuts, or vegetables. Review with the class which areas of horticulture deal with these particular examples. TM: A1-2 highlights the definitions of the three areas of the horticultural industry.**

Objective 3: Identify and define activities included in the ornamental horticulture industry.

(PowerPoint Slide 13)

III. Ornamental horticulture, one of the three major areas of the horticulture industry, can itself be divided into two categories. These are floriculture and landscape horticulture. Both involve the use of flowering and foliage plants.

Foliage plants are those used for their colorful greenery or leaves.

(PowerPoint Slide 14)

- A. Floriculture is the area of horticulture associated with cut flowers, potted plants, and annual bedding plants. Producing, transporting, and using flowering and foliage plants is known as **floriculture**.

(PowerPoint Slide 15)

- B. Before plants are placed in the landscape they are grown and cared for in a nursery. A **nursery** is a place which specializes in starting plants, shrubs, and ornamental trees which can later be transplanted to landscape areas. The production and use of plants to beautify the environment is **landscape horticulture**. Landscape horticulture also includes designing landscaping plans and landscape maintenance.

(PowerPoint Slide 16 shows an example of a landscape design some people draw up in order to organize and layout their plants efficiently.)

***Pictures of flower shops and landscapes and live examples of cut flowers, flowering or bedding plants, and foliage plants would help students better understand the divisions of ornamental horticulture. TM: A1-3 highlights the definitions used in ornamental horticulture.*

Review/Summary: There are review questions on the PowerPoint Slide 17. Ask these questions to your students and make sure they understand the answers properly. You can use LS:A1-1 as a review. Have each student fill out the worksheet. Then have the students present their answers in front of the class.

Application: The following student activity can be used to apply the student learning objectives: LS: A1-1—Exploring the Horticulture Industry

Evaluation: Evaluation should be based on student comprehension of the learning objectives. This can be determined using the attached sample written test.

Answers to Sample Test:

Part One: Matching

- | | |
|------|------|
| 1. a | 6. i |
| 2. f | 7. e |
| 3. h | 8. g |
| 4. d | 9. c |
| 5. b | |

Part Two: Completion

1. garden culture
2. botany
3. nursery
4. foliage plants

Part Three: Short Answer

1. olericulture, pomology

Sample Test

Name _____

Test

Unit A Lesson 1: Exploring the Horticulture Industry

Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | | |
|----------------------------|----------------------------|---------------------------|
| a. horticulture | b. olericulture | c. landscape horticulture |
| d. pomology | e. horticulture technology | f. horticulture science |
| g. ornamental horticulture | h. floriculture | i. horticulture industry |

- _____ 1. The culture of plants for food, comfort, and beauty.
- _____ 2. The field of science that deals with the cultivation of horticultural plants.
- _____ 3. The production, transportation, and use of flowering or foliage plants.
- _____ 4. The food crop production area of horticulture that deals with fruit and nuts.
- _____ 5. Includes the planting, harvesting, storing, processing, and marketing of vegetable crops.
- _____ 6. The combination of scientific, technological, and production activities designed to meet the needs of the horticulture consumer.
- _____ 7. The application of science to horticulture.
- _____ 8. The major area of horticulture which includes floriculture and landscape horticulture.
- _____ 9. Includes designing landscape plans and the maintenance of landscapes.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

1. In Latin, horticulture means _____.
2. _____ is the study of plants and their processes.
3. Plants are grown and cared for in a _____ before being placed in the landscape.
4. _____ are plants used for their greenery or leaves.

Part Three: Short Answer

Instructions. Provide information to answer the following question.

1. List the two areas of horticulture related to food crop production.

TM: A1-1

HORTICULTURE

Horticulture is the culture of plants for food, comfort, and beautification purposes.

Horticultural science—The field of science that deals with the cultivation of horticultural plants.

Botany—The study of plants and their processes.

Horticulture technology—The application of science to horticulture.

**Science + Technology +Production =
THE HORTICULTURE INDUSTRY**

THREE SEGMENTS OF THE HORTICULTURE INDUSTRY

- 1. Ornamental horticulture—The growth and use of plants for their beauty.**
- 2. Olericulture—The planting, harvesting, storing, processing, and marketing of vegetable crops.**
- 3. Pomology—The planting, harvesting, storing, processing, and marketing of fruit and nut crops.**

ORNAMENTAL HORTICULTURE

Floriculture—Producing, transporting, and using flowering and foliage plants. Includes the use of cut flowers, potted plants, and annual bedding plants.

Landscape horticulture—The production and use of plants to beautify the environment.

Nursery—A place where plants, shrubs, and ornamental trees are started for transplanting to landscape areas.

LS: A1-1

Name _____

Lab Sheet

Unit A Lesson 1:Exploring the Horticulture Industry

Instructions. Select one of the areas of horticulture discussed in class today; floriculture, landscape horticulture, pomology, or olericulture. Using the resources available to you (this can include your textbook, magazines, and other resources), research your chosen area more completely. Answer the following questions.

1. Which area of horticulture did you choose and why?
 2. Is this area of horticulture practiced in our community?
 3. How does this area of horticulture affect our community? How could it affect a larger community?
 4. How have science and technology affected this area of horticulture?