



## **School District of Marshfield**

### **Course Syllabus**

Course Name: Horticulture  
Length of Course: Semester  
Credits: 1/2

#### Course Description:

Are you interested in plants for the home and business? Use the greenhouse extensively for the production of bedding plants. Explore horticultural career opportunities, study basic plant growth and soils, learn about holiday arrangements and make one of your own. You will also practice pruning techniques and develop your own landscape plan. In addition you can experiment and learn about plant growth (hands-on) with our hydroponics equipment.

#### Learning Targets:

- Demonstrate knowledge of plant propagation.
- Demonstrate knowledge and proficiency in floriculture.
- Demonstrate knowledge and proficiency in landscaping.
- Demonstrate knowledge and proficiency in gardening.

#### Topic/Content Outline-Units and Themes:

##### First Quarter

1. Examine horticultural industry (4 days)
  - A. discuss the scope, size, and economic importance of the horticulture industry in the United States
  - B. explain plant taxonomy system
2. Recognize the basic anatomy plants and describe the function of each part (4 days)
  - A. list and describe the basic anatomy of plants
  - B. explain the process of photosynthesis
  - C. describe the process of reproduction

3. Explain the basic needs of plants and the various factors that make up their environment (5 days)
  - A. describe the differences between clayey, sandy, and loamy soils
  - B. explain what is meant by the pH value of soil
  - C. list four aboveground requirements for good plant growth
  - D. list three major plant food elements
4. List four types of growth regulators used in the horticulture industry (2 days)
5. Pests and Pesticides (5 days)
  - A. outline a pest control program explaining when biological control should be used and what point chemicals must be used
  - B. Identify insect pests and select and apply appropriate insecticides
  - C. Identify fungus diseases, rodents, mollusks and nematodes, and prescribe a chemical control for each
  - D. Select and apply herbicides so that weed control is accomplished without damage to the crop being cultivated or contamination of the environment
6. Propagate plants using seeds (15 days)
  - A. identify the parts of a seed and the functions of each
  - B. prepare a medium for seeds, sow seeds, and provide the proper conditions for germination
  - C. water, fertilize, and harden off seedlings before transplanting
  - D. transplant seedlings into flats or pots
7. Collect softwood and semi-hardwood cutting wood, prepare cuttings, and root them (5 days)
  - A. examine the processes of taking cuttings
8. Grow and maintain healthy interior landscape plants (5 days)
  - A. mix a medium to use for growing various interior plants
  - B. list the four methods of watering interior plants
  - C. list the four major concerns in caring for interior plants

Second 9 weeks

9. Annual Flowers (20 days)
  - A. design a bed layout using annual flowers
  - B. demonstrate proper transplanting techniques for annual flowers
  - C. prepare soil for annual flowers
  - D. create hanging baskets of annual flowers

10. Gardening (10 days)
  - A. demonstrate techniques for the planting of a small vegetable garden
  - B. care for a vegetable garden, producing a marketable-quality crop
  - C. design, plant and maintain a container garden
  - D. design, plant and maintain a perennial garden
  - E. design a layout for a perennial border
  - F. list the environmental factors that affect perennial gardens
11. Force bulbs indoors and use bulbs in the landscape (3 days)
  - A. describe the soil and fertilizer used in the flowering of bulbs
  - B. explain how planting depth and spacing of bulbs are determined
  - C. describe how to care for bulbs after they have flowered
12. Floriculture (7 days)
  - A. create a floral design
  - B. create a corsage and a boutonniere
  - C. create attractive bows for decorative arrangements
13. Pruning (5 days)
  - A. demonstrate pruning a stem at the proper angle
  - B. explain how the correct time to prune is determined

Required Core Resources: Introductory Horticulture, 5th edition, Edward Reiley and Carroll Shry