Landscape Design and Management

The Landscape Design and Management course allows students to become more knowledgeable about and appreciative of landscape design and management. Topics include career opportunities, safety, landscape design, plant selection, landscape growth and the environment, landscape establishment and management, interior plantscaping and xeriscaping, landscape business management, and technology.

Content standards for this course are not intended to serve as the entire curriculum. Teachers are encouraged to expand the curriculum beyond the limits of these content standards to accommodate specific community interests and utilize local resources. This course encourages critical thinking, use of the scientific method, integration of technology, development of student leadership skills, and application of knowledge and skills related to practical questions and problems. Safety concepts are integrated into instruction to the maximum extent possible.

This course may be taught as a one-credit or half-credit course. For a half-credit course, content standards 1, 2, 3, 4, 5, 6, 8, and 9 must be included.

Career and technical student organizations are integral, cocurricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

Career Opportunities

Students will:

1. Compare job characteristics for various careers in landscape design and management.

Safety

2. Identify safe use of pesticides, power equipment, and hand tools in the landscaping industry.

Design

3. Apply principles of landscape design, including simplicity, balance, focalization of interest, rhythm and line, scale and proportion, and unity.
   - Describing computer programs used in landscape planning
   - Designing a landscape plan, including enhancement features
     Examples: fencing, birdbath, gazebo, walkway, driveway
Landscape Plant Selection

4. Identify common plants used in landscape design.
   Examples: trees, shrubs, ground covers, vines, flowers, turfgrass
   - Describing physical and cultural characteristics of common plants used in landscape design
     Examples: physical—color, flowering, foliage, fruiting
     cultural—cold or heat hardiness, sun or shade tolerance

Landscape Growth and the Environment

5. Describe environmental factors that affect plant growth.
   - Explaining the importance of specific plant processes
     Examples: photosynthesis, respiration, transpiration

6. Analyze landscape plants for symptoms of nutrient deficiencies.
   Examples: primary nutrients—nitrogen, phosphorus, potassium
   secondary nutrients—calcium, sulfur, magnesium
   trace nutrients—boron, manganese, chlorine, zinc, molybdenum, iron,
   copper, aluminum

7. Explain environmental issues related to landscape design and management.

Landscape Establishment and Management

8. Demonstrate methods for planting shrubs, trees, annuals, bulbs, groundcovers, and vines.

9. Describe techniques used for establishing and maintaining landscapes, including pruning,
   fertilizing, irrigating, mulching, and controlling pests.
   - Identifying insects, diseases, and weeds that pose a problem in the landscape
   - Describing types of selective and nonselective pesticides used in the landscaping industry

10. Identify criteria for the selection of hand tools, power tools, power equipment, and machinery
    for a specific landscape task.
    - Describing basic maintenance procedures required for tools and equipment used in landscaping

11. Describe the purpose of various sprinklers within an irrigation system.
    Examples: impulse, oscillating, automatic, pop-up
    - Describing methods of drainage in a landscape
      Examples: tiling, sloping
Interior Plantscaping and Xeriscaping

12. Identify common needs for indoor plants used in interior plantscaping.
   Examples: light, media, watering and drainage, fertilization, temperature, humidity
   - Explaining principles of interior design
   - Selecting techniques used to achieve xeriscaping concepts

Business Management

13. Demonstrate business-related work ethics and managerial skills for the successful operation of a landscape business.
   Examples: work ethics—following instructions, being on time, cooperating with others
              managerial skills—record keeping, budgeting, pricing, scheduling work,
                          inventorying, purchasing, advertising, handling customer complaints,
                          communicating in oral and written form

Technology

14. Identify advancements in technology that enhance the landscaping industry.