

NURSERY/LANDSCAPING

Curriculum Content Frameworks

Please note: All assessment questions will be taken from the knowledge portion of these frameworks.

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Curriculum Content Frameworks

Nursery/Landscaping

Grade Levels: 10, 11, 12

Course Code: 491330

Prerequisite: Agriculture Science and Technology
or Agriculture Science

Course Description: This course covers the production of plants, shrubs, and ornamental trees for transplanting to landscape designs. Propagation, designing plans, installation, maintenance, transportation, and careers are included in the curriculum.

Table of Contents

	Page
Unit 1: Introduction to Nursery and Landscaping Industry	1
Unit 2: Safety in Nursery/Landscape	2
Unit 3: Landscape Process	3
Unit 4: Landscape Design	4
Unit 5: Plant Selection	6
Unit 6: Landscape Contracting	7
Unit 7: Landscape Installation	8
Unit 8: Landscape Maintenance	9
Glossary	10

Unit 1: Introduction to Nursery and Landscaping Industry

Hours: 5

Terminology: Aesthetic, Entrepreneurship, Hydrozoning, Landscape architect, Landscape contractor, Landscape designer, Landscape industry, Landscape management, Landscaping, Nursery, Nursery industry, Nursery/Landscaping CDE, Ornamental horticulture, Placement, Proficiency, Xeriscaping

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
1.1 Define terminology	1.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
1.2 Identify the economic scope of the nursery/landscaping industry in the United States	1.2.1 Search the Internet for current data on the economic scope of the nursery/landscaping industry and prepare a report	Foundation	Arithmetic/ Mathematics	Applies a mathematical formula to solve a problem [1.1.3]	
		Personal Management	Organizational Effectiveness	Comprehends the organization's modes of operation [3.3.5]	
1.3 Discuss careers available in the nursery and landscaping industry	1.3.1 Research a career in the nursery and landscaping industry to determine educational requirements, working conditions and salary	Foundation	Reading	Applies information to job performance [1.3.4]	
				Uses standard occupational resource materials [1.3.22]	
		Personal Management	Career Awareness, Development, and Mobility	Develops skills to locate, evaluate, and interpret career information [3.1.4]	
				Identifies education and training needed to achieve goals [3.1.8]	
1.4 Discuss the purpose of landscaping	1.4.1 Evaluate landscapes in the area	Foundation	Speaking	Asks questions to obtain information [1.5.4]	
		Thinking	Reasoning	Sees relationship between two or more ideas, objects, or situations [4.5.5]	
1.5 Explain the basic principles of xeriscaping	1.5.1 Identify materials used in the xeriscaping process	Foundation	Writing	Applies/Uses technical words and concepts [1.6.4]	
		Thinking	Problem Solving	Comprehends ideas and concepts related to xeriscaping [4.4.1]	
1.6 List the FFA opportunities available to students interested in nursery and landscape management	1.6.1 Participate in FFA activities related to nursery/landscaping	Foundation	Speaking	Communicates a thought, idea, or fact in spoken form [1.5.5]	
		Personal Management	Career Awareness, Development and Mobility	Sets well-defined and realistic personal/career goals (short-term and long-term) [3.1.11]	

Unit 2: Safety in Nursery/Landscape

Hours: 5

Terminology: Accident, Hazard, Material Safety Data Sheet (MSDS), Risk, Safety

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
2.1 Define terminology	2.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
2.2 Discuss the meaning and importance of safety and safe work in nursery/landscaping	2.2.1 Relate examples of safety hazards in nursery/landscaping, including equipment used in crop production and the inputs applied to plants such as pesticides and fertilizers	Foundation	Reading	Distinguishes between fact and opinion [1.3.11]	
	2.2.2 Name examples of accidents that have occurred locally in nursery/landscaping		Speaking	Asks questions to obtain information [1.5.4] Communicates a thought, idea, or fact in spoken form [1.5.5]	
2.3 Identify hazards in nursery/landscaping	2.3.1 Survey hazardous situations in local nursery/landscaping facilities; prescribe the appropriate safety measures to be taken and propose ways of eliminating/ reducing the risk of these hazards	Foundation	Reading	Complies with safety and health rules in a given work environment [3.2.2]	
		Personal Management Skills	Integrity/Honesty/Work Ethic	Analyzes and applies what has been read to specific task [1.3.2]	
2.4 Describe the importance of personal safety in nursery/landscaping	2.3.2 Develop a list of practices to reduce risk when working with plants	Foundation	Reading	Complies with safety and health rules in a given work environment [3.2.2]	
	2.4.1 Identify and properly use appropriate PPE in nursery/landscaping	Personal Management Skills	Integrity/Honesty/Work Ethic	Analyzes and applies what has been read to specific task [1.3.2]	
2.4 Describe the importance of personal safety in nursery/landscaping	2.4.2 Calculate the cost of PPE for an individual involved in nursery/landscaping	Foundation	Arithmetic/Mathematics	Calculates dollar amounts [1.1.7]	
	2.4.3 Work together with others to promote safety in nursery/landscaping	Interpersonal	Negotiation	Works to resolve conflict between two or more individuals [2.5.3]	
	2.4.4 Take a test on nursery/landscaping safety before beginning work with plants	Thinking	Problem Solving	Comprehends ideas and concepts related to safety with animals [4.4.1]	

Unit 3: Landscape Process

Hours: 5

Terminology: Base plan, Client, Contour interval, Contour lines, Family (client) inventory survey, Family living area, Final plans, Functional diagrams, Outdoor living area, Preliminary designs, Public area, Service area, Site analysis, Slope, Terrain, Topography

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
3.1 Define terminology	3.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
3.2 List features by which a site can be evaluated	3.2.1 Complete a site analysis	Foundation	Writing	Analyzes data, summarizes results, and makes conclusions [1.6.2]	
		Thinking	Creative Thinking	Creates new design by applying criteria specified in information sheet [4.1.3]	
3.3 Describe the content and use of a family (client) inventory survey	3.3.1 Use a family (client) inventory survey in preparing a landscape design	Foundation	Writing	Analyzes data, summarizes results, and makes conclusions [1.6.2]	
		Thinking	Creative Thinking	Creates new design by applying criteria specified in information sheet [4.1.3]	
3.4 Identify indoor and outdoor use areas	3.4.1 Apply knowledge of the indoor areas to a landscape design	Foundation	Reading	Identifies relevant details, facts, and specifications [1.3.16]	
	3.4.2 Organize the landscape design by use areas (public area, service area, outdoor living area)	Thinking	Creative Thinking	Reshapes goals in ways that reveal new possibilities [4.1.9]	

Unit 4: Landscape Design

Hours: 10

Terminology: Balance, Color, Computer Aided Design (CAD), Elevation view, Focalization of interest, Form, Foundation planting, Hardscape, Incurve, Landscape design, Line, Masses, Outcurve, Perspective, Plan view, Proportion, Rhythm and line, Simplicity, Subsoil, Texture, Topsoil, Unity, Voids

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
4.1 Define terminology	4.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
4.2 Perform measurements and duplicate angles	4.2.1 Read an architect's scale and an engineer's scale	Foundation	Arithmetic/ Mathematics	Calculates measurements taken from measuring devices [1.1.9]	
	4.2.2 Use a scale in preparing a landscape design	Personal Management	Career Awareness, Development, and Mobility	Analyzes own knowledge, skills, and ability [3.1.2]	
4.3 Identify the drafting tools of the landscape designer (drawing board, T-square, drawing paper, trash paper, drafting tape, drawing pencils, erasure shield, triangles, architect's scale, engineer's scale, circle template, French curves, lettering instrument)	4.3.1 Draw a landscape design using traditional tools	Foundation	Reading	Locates pertinent information in documents such as manuals, graphs, and schedules to perform tasks [1.3.18]	
		Personal	Organization Effectiveness	Applies knowledge to implement work-related system or practice [3.3.4]	
4.4 Distinguish between the plan, elevation, and perspective views of landscape proposals	4.4.1 Use plan, elevation, and perspective views to illustrate a landscape design	Foundation	Reading	Analyzes and applies what has been read to specific task [1.3.3]	
		Thinking	Seeing Things in the Mind's Eye	Visualizes a system's operation from schematics [4.6.2]	
4.5 Describe the basic principles that lead to good design (balance, focalization of interest, proportion, rhythm, simplicity, unity)	4.5.1 Apply principles of design to a landscape plan	Foundation	Speaking	Communicates a thought, idea, or fact in spoken form [1.5.5]	
		Thinking	Reasoning	Comprehends ideas and concepts related to landscape design [4.5.2]	

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS		
What the Student Should be Able to Do		What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
4.6 Identify elements of design; line, form, texture, color	4.6.1 Classify landscape plants based on their line, form, texture, and color	Foundation	Reading	Identifies relevant details, facts, and specifications [1.3.16] Interprets drawings to obtain factual information [1.3.17]
		Thinking	Reasoning	Sees relationship between two or more ideas, objects, or situations. [4.5.5]

Unit 5: Plant Selection

Hours: 10

Terminology: Annual, Balled & Burlapped, Bare-rooted plant, Bedding plants, Biennials, Botanical name, Branching habits, Bulb, Canopy, Common name, Containerized/container grown, Cultivar, Exotic plants, Fibrous, Foundation planting, Genus, Hardiness, Hedge, Herbaceous, Microclimate, Native plants, Naturalized plants, Ornamental grasses, Perennials, Root systems, Silhouette, Species, Specimen plant, Tap root, Tree, Variety, Vine, Woody plants

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
5.1 Define terminology	5.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
5.2 Explain plant nomenclature	5.2.1 Use Latin and common names for landscape plants	Foundation	Reading	Applies information and concepts derived from printed materials [1.3.3]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
5.3 Describe the factors relevant to proper plant selection; function, environmental, messiness, ornamental characteristics, pest resistance, safety, soil	5.3.1 Select plants for the landscape based on function, environmental, messiness, ornamental characteristics, pest resistance, safety, soil	Foundation	Speaking	Communicates a thought, idea, or fact in spoken form [1.5.5]	
		Thinking	Decision Making	Demonstrates decision-making skills [4.2.4]	
5.4 Explain the seasonal changes in a landscape	5.4.1 Select seasonal plants for a landscape	Foundation	Speaking	Participates in conversation, discussion, and group presentations [1.5.8]	
		Thinking	Creative Thinking	Finds new ways of dealing with existing problems/situations [4.1.5]	
5.5 Describe the uses and limitations of flowers in a landscape design	5.5.1 Design a flower border	Foundation	Science	Applies a scientific principle to solve a problem [1.4.8]	
		Thinking	Problem Solving	Draws conclusions from observations, evaluates conditions, and gives possible solutions [4.4.5]	
5.6 Discuss the factors used in the comparison of different turfgrasses	5.6.1 Select turfgrass best suited for a landscape use	Foundation	Writing	Presents answers/conclusions in a clear and understandable form [1.6.13]	
		Thinking	Problem Solving	Demonstrates logical reasoning in reaching a conclusion [4.4.2]	

Unit 6: Landscape Contracting

Hours: 5

Terminology: Bid, Contract, Contractor, Estimate, Estimator, Specifications, Subcontractor, Take-off

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
6.1 Define terminology	6.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
6.2 Determine calculations needed for landscape take-offs	6.2.1 Calculate landscape take-offs	Foundation	Arithmetic/ Mathematics	Applies addition, subtraction, multiplication, and division to real-world situations [1.1.1]	
		Thinking	Problem Solving	Draws conclusions from observations, evaluates conditions, and gives possible solutions [4.4.5]	
6.3 Describe estimates and bids associated with landscape projects	6.3.1 Create an estimate for a landscape project	Foundation	Writing	Produces neat, legible document from typewriter or computer [1.6.15]	
	6.3.2 Develop a bid for a landscape project	Interpersonal	Customer Service	Works with customers to satisfy their expectations [2.3.9]	

Unit 7: Landscape Installation

Hours: 10

Terminology: Antidesiccants, Calibration, Cut, Discharge rate, Drainage, Drip tubing, Emitter, Fill, Grading, Humus, Loam, Plugs, Precipitation rate, Rhizome, Seed analysis label, Sodding, Soil texture, Spray pattern, Sprigs, Sprinkler head, Sprinkler irrigation, Stolonizing, Stolons, Trickle irrigation, Turf

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
7.1 Define terminology	7.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
7.2 Identify tools used in the installation of landscape plants	7.2.1 Use the appropriate tools for different landscape jobs	Foundation	Reading	Identifies relevant details, facts, and specifications [1.3.16]	
		Thinking	Decision Making	Demonstrates decision-making skills [4.2.4]	
7.3 Describe accepted methods of lawn installation/renovation	7.3.1 Prepare a site for installation	Foundation	Speaking	Applies/Uses technical terms as appropriate to audience [1.5.2]	
	7.3.2 Sod a site	Thinking	Knowing How to Learn	Uses available resources to acquire new skills or improve skills [4.3.4]	
	7.3.3 Sprig a site				
	7.3.4 Seed a site				
7.4 Demonstrate proper plant installation methods	7.4.1 Install trees and shrubs	Foundation	Speaking	Applies/Uses technical terms as appropriate to audience [1.5.2]	
	7.4.2 Install ground covers and flowers	Thinking	Knowing How to Learn	Uses available resources to acquire new skills or improve skills [4.3.4]	
7.5 Distinguish between sprinkler and trickle irrigation	7.5.1 Design an irrigation system	Foundation	Listening	Comprehends ideas and concepts related to Landscape Installation [1.2.1]	
	7.5.2 Set up an irrigation system	Thinking	Problem Solving	Draws conclusions from what is read and gives possible solutions [4.4.5]	

Unit 8: Landscape Maintenance

Hours: 10

Terminology: Aeration, Crotch, Crown, Dormancy, Girdling, Graft, Heading back, Heaving, Herbicide, Jump cutting, Lead branch, Mulch, Pruning, Reel mower, Rotary mower, Scaffold branches, Scion, Stock, String trimmer, Suckers, Sunscald, Thinning out, Water sprouts, Weed, Windburn

CAREER and TECHNICAL SKILLS		ACADEMIC and WORKPLACE SKILLS			
What the Student Should be Able to Do		What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
8.1 Define terminology	8.1.1 Prepare a list of terms with definitions	Foundation	Reading	Comprehends written information for main ideas [1.3.7]	
			Writing	Applies/Uses technical words and concepts [1.6.4]	
8.2 Discuss the importance of proper maintenance of landscape	8.2.1 Participate in a class discussion on the importance of landscape maintenance	Foundation	Speaking	Participates in conversation, discussion, and group presentations [1.5.8]	
		Personal Management	Organizational Effectiveness	Comprehends the organization's modes of operation [3.3.5]	
8.3 Describe the types of pruning	8.3.1 Demonstrate proper pruning techniques	Foundation	Reading	Comprehends written specifications and applies them to a task [1.3.9]	
		Thinking	Decision Making	Considers risks when making a decision [4.2.3]	
8.4 Compare the methods of weed control in the landscape	8.4.1 Remove weeds from a landscape	Foundation	Writing	Adapts notes to a proper form [1.6.1]	
	8.4.2 Install a weed cloth	Thinking	Reasoning	Determines which conclusions are correct when given a set of facts and a set of conclusions	
8.5 Identify tools used in landscape maintenance	8.5.1 Use the appropriate tools for different landscape maintenance jobs	Foundation	Reading	Locates pertinent information in documents such as manuals, graphs, and schedules to perform	
		Personal Management	Organizational Effectiveness	Applies knowledge to implement work-related	
8.6 Discuss the maintenance of landscape tools	8.6.1 Perform basic maintenance on tools	Foundation	Writing	Organizes sentences into paragraphs [1.6.11]	
	8.6.2 Sharpen blades	Interpersonal	Coaching	Helps others learn new skills [2.1.3]	
	8.6.3 Maintain tools				
8.7 Discuss the proper techniques needed to water, fertilize, edge, and mulch	8.7.1 Maintain landscape plants through proper watering, fertilizing, edging, and mowing practices	Foundation	Science	Solves practical problems using scientific methods and techniques [1.4.23]	
		Thinking	Problem Solving	Comprehends ideas and concepts related to landscape maintenance [4.4.1]	

Glossary

Unit 1: Introduction to Nursery and Landscaping Industry

1. Aesthetic – attractive to the human senses
2. Entrepreneurship – working for one's self
3. Hydrozoning – grouping plants on the basis of their water needs
4. Landscape architect – a licensed professional who practices landscape planning, usually on a scale larger than residential properties
5. Landscape contractor – a professional who carries out the installation of landscapes
6. Landscape designer – a professional who devotes all or part of a work day to the design of landscapes
7. Landscape industry – a service based industry which serves by fabricating environments where people can live, work, play, or just pass time; these environments are primarily outdoors or in interior settings that seek to suggest outdoors
8. Landscape management – the extended care of existing landscapes, usually under terms of a contract
9. Landscaping – a profession involving the design, installation, and maintenance of the outdoor human living environment
10. Nursery – any place where plants, shrubs, or trees are grown either for transplanting or grafting stocks; a group of young plants or trees in a plantation
11. Nursery industry – a service based industry which serves by providing plants, materials, and supplies for businesses and/or individuals
12. Nursery/Landscaping CDE – an FFA Career Development Event that allows for competition in the different aspects of Nursery/Landscaping
13. Ornamental horticulture – the practice of using plants and other materials for decorative purposes
14. Placement – working for someone else
15. Proficiency – an FFA award for students conducting an SAE
16. Xeriscaping – techniques of landscaping that conserve water

Unit 2: Safety in Nursery/Landscape

1. Accident – an event that happens unexpectedly or unintentionally
2. Hazard – exposure to danger or harm
3. Material Safety Data Sheet (MSDS) – a sheet containing information about the safe use of a chemical and the steps to take in case of an accident
4. Risk – the chance that an accident might occur during a research project
5. Safety – a state of being free of danger and injury

Unit 3: Landscape Process

1. Base plan – a scaled drawing of a home with doors, windows, existing hardscapes, property lines and easements
2. Client – a customer or receiver of services
3. Contour interval – the vertical distance between contour lines
4. Contour lines – broken lines found on a topographic map; they represent vertical elevation
5. Family (client) inventory survey – a form on which the client provides information that relates to the landscape project
6. Family living area – the area of a landscape that usually is located toward the rear and side of a house; it is connected to the family living area of the house and is where the family relaxes and entertains guests; it is developed for full or partial privacy
7. Final plans – master drawing of a landscape design project that is graphically detailed and completely specific; it incorporates all of the suggestions and reactions of the client to earlier diagrams; these plans will be used for installation of the landscape
8. Functional diagrams – loosely drawn freeform drawings used to begin the arrangements of the client's site; these help the designer make important logical decisions concerning layout of the site, size requirements of each use area, circulation patterns, potential conflicts and the relationship of off-site features to on-site areas
9. Outdoor living area – the area of a landscape that is developed for privacy and should be accessible from the house
10. Preliminary designs – the designer's first draft version of how each area of the landscape will be shaped; it is suitable for presenting to the client for review in order to obtain feedback
11. Public area – the area of a landscape that is seen by everyone who drives or walks past; it is also the area through which everyone passes who enters a building or house; it should be connected to the public area of the house
12. Service area – the area of a landscape which is used for service; it is usually screened from view and located near the kitchen or other indoor service area
13. Site analysis – an accurate sketch of the site to be landscaped which includes everything currently on the site recorded as to its relationship to everything else currently on the site
14. Slope – a measurement that compares the horizontal length to the vertical rise or fall of land; the measurement can be determined from a topographic map
15. Terrain – the rise and fall of the land
16. Topography – a record of an area's terrain

Unit 4: Landscape Design

1. Balance – the even distribution of materials on opposite sides of a central axis; there are three kinds of balance: symmetric, asymmetric, and proximal/distal
2. Color – the greatest visual impact of all design elements; its source is visible light; subdivided into warm and cool colors
3. Computer Aided Design (CAD) – the use of computer hardware and software to produce drawings
4. Elevation view – a scaled drawing with two dimensions, one horizontal and one vertical
5. Focalization of interest – principle of design that selects and positions visually strong items in the landscape composition
6. Form – the three dimensional shape of a plant
7. Foundation planting – placing plants around the foundation of the house; this softens the corners and blocks the view of the foundation
8. Hardscape – design materials that are not living plant materials; the term usually is applied to the constructed materials of a landscape
9. Incurve – the center of a corner planting bed and a natural focal point
10. Landscape design – the profession concerned with the planning and planting of outdoor space to secure the most desirable relationship between land forms, architecture, and plants to best meet human needs for function and beauty
11. Line – the outline of plants, plant parts, and physical features
12. Masses – solid vertical areas of plantings, buildings, walls, or land forms
13. Outcurve – the sides of a corner planting
14. Perspective – a drawing that permits multiple sides of an object to be seen in a single view; dimensions are not measurable
15. Plan view – a measurable drawing seen as though the viewer's line of sight is perpendicular to the surface
16. Proportion – principle of design concerned with the size relationships between all the features of the landscape
17. Rhythm and line – principle of design; something is repeated at a standard interval, creating a rhythm; lines establish the shape and form of a landscape
18. Simplicity – principle of design that makes the viewer comfortable in the landscape; does not imply simplistic
19. Subsoil – that part of the soil profile which lies below the usual plow depth without any specific limitation in depth or kind of material; a b horizon, the first change with depth in texture or structure
20. Texture – the appearance of a plant in terms of coarseness or fineness, roughness or smoothness, heaviness or lightness, denseness or thinness

21. Topsoil – surface soils and subsurface soils which presumably are fertile soils, rich in organic matter or humus debris; top soil is found in the uppermost soil layer called the a horizon
22. Unity – principle of design in which all separate parts contribute to the creation of the total design
23. Voids – the horizontal open areas of the landscape

Unit 5: Plant Selection

1. Annual – a plant that completes its life cycle in one growing season
2. Balled & burlapped – a form of plant preparation in which a large part of the root system is retained in the soil ball; the ball is wrapped in burlap to facilitate handling during sale and transplanting
3. Bare-rooted plant – a form of plant preparation in which all soil is removed from the root system; the plant is lightweight and easier to handle during sale and transplanting
4. Bedding plants – herbaceous plants pre-seeded and grown in containers
5. Biennials – a plant that lives for two growing seasons and dies
6. Botanical name – the scientific name of plants which includes the genus and species
7. Branching habits – a combination of the number of branches, the average size of branches, the flexibility of branches and the vertical or horizontal direction of their growth
8. Bulb – a flowering perennial that survives the winter as a dormant fleshy storage structure
9. Canopy – the collective term for the foliage of a tree
10. Common name – the name by which a plant is known to the general public
11. Containerized/container grown – a form of plant preparation for sale and transplanting; when purchased, the plant is growing with its root system intact within a plastic, metal, or tarpaper container
12. Cultivar – group of organisms with distinguishing characteristics from other plants in a species, but does not transfer those characteristics to the offspring through sexual reproduction
13. Exotic plants – plants that have been introduced to an area by human beings, not nature
14. Fibrous – type of root system that is composed of profusely branched roots with many lateral rootlets; the fine roots of grass
15. Foundation planting – the planting next to a building that helps it blend more comfortably into the surrounding landscape
16. Genus – members of this group have similar characteristics and relate to each other; first word in the scientific name
17. Hardiness – the ability of a plant to survive through the winter season
18. Hedge – a fence or barrier formed by bushes, shrubs, or small trees growing close together in a line, sometimes with interwoven branches used as a screen
19. Herbaceous – a type of plant that is non-woody; it has no bark

20. Microclimate – regions that provide atypical growing conditions
21. Native plants – a plant that evolved naturally within a certain locale
22. Naturalized plants – plants that were introduced to an area as an exotic plant, but which have adapted so well that it may appear to be native
23. Ornamental grasses – grasses produced, planted, and maintained for their beauty; Liriope
24. Perennials – a plant that lives more than two growing seasons; it usually is dormant during the winter
25. Root systems – system used by plants for anchorage, uptake of nutrients, and storage of manufactured foods; these systems range from total tap root systems, with a large single root growing straight down into the soil, to full fibrous systems, with thousands of fine, hair like roots spreading out in all directions
26. Silhouette – the outline of an object viewed as dark against a light background
27. Species – a group of things that exhibit more similarities than the members of the genus; second word in a scientific name
28. Specimen plant – a plant that displays outstanding form, texture, and color
29. Tap root – root system composed of one main root which grows straight down into the soil
30. Tree – any woody, perennial plant which normally has one well-defined stem and a definitely formed crown; it is usually considered to have a minimum height of 15 feet
31. Variety – a group of related plants that differs from other similar groups by characters too trivial or inconsistent to be recognized as a species; often any category of lower rank in a species
32. Vine – any woody or herbaceous plant that trails, climbs, or creeps as contrasted to those that stand without support
33. Woody plants – any shrub, tree, or certain vines, as distinguished from herbaceous plants, which produces wood and has buds surviving above ground during the winter

Unit 6: Landscape Contracting

1. Bid – a fixed price placed on work to be done
2. Contract – an agreement between two parties that is legally binding
3. Contractor – party in contract with the client or the client's representatives
4. Estimate – an approximation of the price that a customer will be charged for a landscape project
5. Estimator – the individual usually assigned to do the landscape take-off
6. Specifications – written descriptions of landscape materials, work, and time schedules for a project
7. Subcontractor – firm in contract with the prime contract holder to provide selected services for the accomplishments of a project
8. Take-off – the calculation of quantities from plans and specifications

Unit 7: Landscape Installation

1. Antidesiccants – a liquid sprayed on plants to reduce water loss, transplant shock, windburn, and sunscald
2. Calibration – the adjustment of a piece of equipment so that it distributes a given material at the rate desired
3. Cut – a grading practice that removes earth from a slope
4. Discharge rate – the amount of water flowing from the irrigation system over a measured period of time, usually measured in gallons per minute or hour (gpm or gph)
5. Drainage – the act of water passing through the root area of soil; soil is well drained if water disappears in 10 minutes or less from a shrub or tree planting
6. Drip tubing – thin black tubing used for trickle irrigation
7. Emitter – the device that functions as a sprinkler head for trickle irrigation
8. Fill – a grading practice that adds earth to a slope or material used to bring an area to grade
9. Grading – the moving of soil and the reshaping of the land
10. Humus – created by decaying organic matter, it aids the soil in moisture retention
11. Loam – soil that contains approximately equal amounts of clay, silt, and sand (a desirable condition)
12. Plugs – small square, rectangle, or circle of sod cut about two inches thick used to reestablish a lawn
13. Precipitation rate – the amount of water placed over a landscape area; it is measured in inches of water per hour
14. Rhizome – an underground stem; new shoots are sent to the surface some distance out from the parent plant; each new plant develops its own root system and becomes independent of the parent plant
15. Seed analysis label – a breakdown of the contents of the seed package on which it appears; must appear on every package of seeds sold
16. Sodding – a method of lawn installation that uses strips of live, growing grass; it produces an immediate effect on the landscape, but is more costly than seeding
17. Soil texture – the composition of a soil as determined by the proportion of sand, silt, and clay that it contains
18. Spray pattern – the specific distribution pattern of a specific sprinkler head
19. Sprigs – pieces of grass shoots; sprigs are commonly used to establish warm-season grass plantings
20. Sprinkler head – the device through which water leaves the pipe and is propelled onto the lawn or plantings

21. Sprinkler irrigation – water applied under pressure over the tops of plants
22. Stolonizing – a form of sprigging where the sprigs are broadcast over the site and covered lightly with soil
23. Stolons – stems that are horizontally above the ground; new plants develop from it and become independent of the parent plant
24. Trickle irrigation – form of irrigation where the water is applied slowly over a longer period of time
25. Turf – the plants in a ground cover and the soil in which the roots grow; a collection of grass plants that form a ground cover

Unit 8: Landscape Maintenance

1. Aeration – the addition of air into the soil; it is accomplished during soil conditioning with materials such as sand or peat moss; it can be encouraged in established lawns by the use of machines called aerators
2. Crotch – the point on a tree at which two branches or a branch and the trunk meet
3. Crown – the point at which the aboveground plant parts and the root systems meet
4. Dormancy – a period of rest that perennial plants experience during the winter season; they continue to live, but have little or no growth
5. Girdling – the complete removal of a strip of bark around the main stem of a plant; after girdling, the ability of nutrients to pass from roots to leaves is lost, causing the eventual death of the plant
6. Graft – a man-made bond between two different plants, one selected for its aboveground qualities (scion) and the other for its below ground qualities (stock)
7. Heading back – a pruning technique that shortens a shrub branch without totally removing it
8. Heaving – an action that causes shallowly rooted plants, such as grasses, groundcovers, and bulbs, to be forced to the surface of the soil; the action results from repeated freezing and thawing of the soil surface
9. Herbicide – a chemical used to kill weeds
10. Jump cutting – a pruning technique for the removal of large limbs from trees with out stripping bark from the trunk; it involves a series of three cuts
11. Lead branch – the most important branch of a tree; cannot be removed without destroying the distinctive shape of the tree
12. Mulch – materials used around plants to reduce water loss, prevent weed growth, keep soil temperatures uniform, and prevent erosion
13. Pruning – the removal of a portion of a plant for better shape or more fruitful growth
14. Reel mower – a mower used for home, recreational, and commercial lawn maintenance; the blades rotate in the same direction as the wheels and cut the grass by pushing it against a non-rotating bed knife at the rear base of the mower
15. Rotary mower – a mower used for home, recreational, and commercial lawn maintenance; the blades move like a ceiling fan, parallel to the surface of the lawn, cutting the grass off as they revolve
16. Scaffold branches – a lateral branch of a tree
17. Scion – shoot portion of a tree
18. Stock – root portion of a tree
19. String trimmer – piece of equipment is used to trim grass and weeds in areas not accessible by a mower

20. Suckers – a succulent branch that originates from the root system; the vegetation of suckers is abnormal and undesirable
21. Sunscald – a temperature-induced form of winter injury; the winter sun thaws the aboveground plant tissue, causing it to lose water; the roots remain frozen, and thereby unable to replace the water; the result is drying of the tissue
22. Thinning out – a pruning technique that removes a shrub branch at or near the growth of the plant
23. Water sprouts – a succulent branch that grows from the trunk of a tree; the vegetation of water sprouts is abnormal and undesirable
24. Weed – a plant growing where it is not wanted and with no economic value
25. Windburn – drying out of plant tissue (especially evergreens) by the winter wind