



New Mexico FFA

Landscape Design

Career Development Event

LANDSCAPE DESIGN CAREER DEVELOPMENT EVENT

7/27/2023

PURPOSE

This skill development is designed to test the participant's knowledge and skills that are necessary to plant and execute a recommended landscape plant for home grounds.

OBJECTIVES

- To be able to identify the tools used in landscape design.
- To gain knowledge of the relationship between the design and installation of landscapes.
- To have the ability to measure and interpret lengths and distances to scale.
- To be able to create styles of freehand lettering.
- To gain knowledge of land features by which a site may be evaluated.
- To have the ability to select proper plants to fill specific roles in the landscape
- To be able to understand the basis of plant nomenclature.

COMMON CORE REFERENCES

7th Grade

CCSS.Math.Content.7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

8th Grade

CCSS.ELA-Literacy.RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

9-10th Grade

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

11-12th Grade

CCSS.Math.Content.HSG-MG.A.3 Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

EVENT PROCEDURES

1. SCORING

The following criteria will be used to score the Landscape Design Career Development Event:

	<i>Points</i>
<u>Graphics</u> - The overall appearance of plan (clean, neat & readable)	100
<u>Written Explanation</u> - Detailed description of the plan and the components used within the plan.	100
<u>Site Analysis</u> - How the design fits into the existing site. Look at views, topography, sun.....	100
<u>Plant Palette</u> - Selection of plant materials, how they fit into needs of client and climate adaptability.....	100
<u>Concept</u> - How the design works. Does it fit the client's needs?.....	100
<u>Landscape Drawing Interpretation</u> - There will be 25 objective questions about the landscape plan worth 6 points each.....	150
<u>Plant ID</u> - 20 specimens from the plant list will be identified.....	<u>100</u>
TOTAL POINTS	750

2. CONTENT

Graphics, Site Analysis, Written Explanation, Plant Palette, and Concept

Each participant will be given a drawing of a house. They also will be given on-site and off-site factors to be considered. In addition, each participant will be given a personality profile of the persons living within the house.

The participants must draw in the landscape features they desire, giving shape and form of plant materials used (specific varieties need not be given), distance from other features of the design, number of plants, etc. Students will have 2 hours to complete this portion of the contest.

Landscape Drawing Interpretation

This practicum section is designed to evaluate the participants' knowledge of and ability in (1) evaluating a landscape design, (2) reading a landscape drawing, (3) measuring and calculating materials needed to execute a landscape plan, and (4) evaluating factors that affect profitability of a landscape business.

A landscape drawing and scratch paper will be provided to the participants. There will be 25 objective questions about the landscape plan, and each correct answer has a value of 6 points. The questions may include such areas as determining how accent was provided in the public area, the form and size specified for a certain plant, the cost of fencing, the number of patio pavers required, the area of sod to be installed, the volume of mulch required and the labor cost to install a ground cover bed. One hour will be allowed for this practicum.

Plant ID

Participants will identify 20 landscape plant specimen in a line up. These plants will come from the identification list located in the rules. ALL plant specimens must be of an example of the MATURE plant. If leaves, flowers, stems or nursery plants are used, they MUST BE accompanied by a photo of the mature plant. Students will have a maximum of 20 minutes for this section.

3. TEAM There may be four members to a team, with the three highest individual total scores making the total for the team.

4. TOOLS Participants should bring an Engineer's scale, blank (unlined) paper, pencils, straight edge, triangle, circle template and/or compass, French curve or curve device. Participants are encouraged to bring drawing boards.

Participants will not be allowed to use rubber stamps, landscape symbol templates, traceable images, or colored pencils for the designation and location of plants in the drawing.

5. SCALE The scale used may be:

- one inch = 10 feet
- one inch = 20 feet
- one inch = 30 feet

6 The plants used in drawings are not limited to the identification list

7. Resource Books

- Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces by Grant W. Reid
- Site Analysis: A Contextual Approach to Sustainable Land Planning and Site Design by James A. LaGro Jr.
- The Art of Landscape Architecture: Design Process and the Craft of Detailing by Thomas R. Ryan
- Time-Saver Standards for Landscape Architecture by Charles W. Harris, Nicholas T. Dines, and Kyle D. Brown
- Landscape Architectural Graphic Standards by Leonard J. Hopper
- Landscape Architecture: A Manual of Environmental Planning and Design by Barry Starke and John Ormsbee Simonds
- Best Plants for New Mexico Gardens and Landscapes by Baker H Morrow

Websites:

- https://www.ose.state.nm.us/WUC/LearningXeriscape/XeriscapeGuide_ScreenResolution.pdf
- <https://www.plantsofthesouthwest.com/>

SAMPLE - SITE ANALYSIS

ON-SITE FACTORS:

The lot located on the mesa west of Las Cruces, is 110 feet long and 85 feet wide. Structures on the lot are the house, driveway and sidewalk. Existing vegetation consists of two mulberry trees in back and some turf in front and back. The turf is in poor condition and may be removed or renovated as needed by the design. Utilities are underground or need not to be considered.

Revise

OFF-SITE FACTORS:

A view of the mountains to the east, across a neighbor's yard, is desirable, while a view of the neighbors' yards to east, north and west are undesirable. Some control of wind and dust, predominately from the west, is needed.

ANALYSIS OF FAMILY NEEDS

The family consists of four people, mother, father and two boys. One boy is elementary school age and the other is junior high age. Family activities include:

- Driving -** They have one car now but will get a second one in the near future.
- Entertaining -** They will occasionally have groups of up to ten people outside. For this they will need a concrete patio to accommodate that number. Shade from trees is wanted for the patio. The grill, table and chairs are all portable and will need storage space when not in use.
- Games -** Their favorite games are croquet and tether ball. The croquet should have a 30' x 60' area and the tether ball needs a 20-foot diameter circle. Storage space is needed for the equipment.
- Gardening -** They want a vegetable garden (ca. 50 sq. ft.) and a small flower garden for cut flowers (50 - 75 sq. ft). All other plantings should be minimum maintenance but provide some color at various seasons. Storage space for gardening tools is needed.
- Pets -** There will be one dog confined to the back yard.
- Other -** A removable clothesline about 25 feet long is needed. Trash collection will be at the curb and will require two containers.

Landscape Design Plant Identification

revised 01/18/2017

001	Adam's Needle / <i>Yucca filamentosa</i>	061	Japanese Spurge / <i>Pachysandra terminalis</i>
002	Afghan Pine / <i>Pinus eldarica</i>	062	Kentucky Bluegrass / <i>Poa pratensis</i> cv
003	American Arborvitae / <i>Thuja occidentalis</i> cv.	063	Kwanzan Japanese Flowering Cherry / <i>Prunus serrulata</i> 'Kwanzan'
004	American Cranberrybush Viburnum / <i>Viburnum trilobum</i>	064	Lantana / <i>Lantana camara</i>
005	Apache Plume / <i>IFallugia paradoxa</i>	065	Lily-Turf / <i>Liriope</i> spp. cv.
006	Astilbe / <i>Astilbe</i> hybrid cv.	066	Littleleaf Boxwood / <i>Buxus microphylla</i> cv .
007	Autumn Sage / <i>Salvia gregii</i>	067	Littleleaf Linden / <i>Tilia cordata</i>
008	Bald Cypress / <i>Taxodium distichum</i>	068	Live Oak / <i>Quercus virginiana</i>
009	Bayberry / <i>Myrica pensylvanica</i>	069	London Planetree / <i>Platanus x acerifolia</i>
010	Bearberry Cotoneaster / <i>Cotoneaster dammeri</i>	070	Marigold / <i>Tagetes</i> spp. cv.
011	Bearded Iris / <i>Iris x germanica florentina</i> cv.	071	Meadow Sage / <i>Salvia nemorosa</i> cv.
012	Beargrass / <i>Nolina microcarpy</i>	072	Mentor Barberry / <i>Berberis x mentorensis</i>
013	Bermudagrass / <i>Cynodon dactylon</i> cv	073	Meserve Holly / <i>Ilex x meserveae</i> cv.
014	Blue Atlas Cedar / <i>Cedrus atlantica</i> 'Glauca'	074	Mexican Elder / <i>Sambucus mexicana</i>
015	Blue Spruce / <i>Picea 'pungens'</i> cv. <i>glauca</i>	075	Mugo Pine / <i>Pinus mugo</i>
016	Border Forsythia / <i>Forsythia x intermedia</i> cv.	076	New Mexico Privet / <i>Forestiera neomexicana</i>
017	Boston Ivy / <i>Parthenocissus tricuspidata</i>	077	Norway Maple / <i>Acer platanoides</i> cv
018	Bumalda Spirea / <i>Spiraea x bumalda</i>	078	Norway Spruce / <i>Picea abies</i>
019	Burkwood Viburnum / <i>Viburnum x burkwoodii</i>	079	Ocotillo / <i>Fonguneria spendeus</i>
020	Butterfly Bush / <i>Buddleia davidii</i>	080	Oleander / <i>Nerium oleander</i>
021	Carpet Bugle / <i>Ajuga reptans</i> cv.	081	One Seeded Juniper / <i>Juniperus monosperma</i> cv
022	Century Plant / <i>Agave</i> spp.	082	Oregon Grape / <i>Mahonia aquifolia</i> cv.
023	Chamisa / <i>Chrysothamnus nauseosus</i>	083	Pansy / <i>Viola x wittrockiana</i> cv.
024	Chinese Holly / <i>Ilex cornuta</i> cv.	084	Pecan / <i>Carya illinoineasis</i>
025	Chinese Juniper / <i>Juniperus chinensis</i> cv.	085	Peony / <i>Paeonia</i> hybrid cv.
026	Chinese Wisteria / <i>Wisteria sinensis</i> cv.	086	Periwinkle / <i>Vinca minor</i> cv.
027	Chitalpa / <i>Chilopsis X catalp</i>	087	Petunia / <i>Petunia x hybrida</i> cv.
028	Colorado (Blue) Spruce / <i>Picea pungens</i> cv.	088	Photinia / <i>Photinia x Fraseri</i>
029	Columbine / <i>Aquilegia x hybrida</i> cv.	089	Pin Oak / <i>Quercus palustris</i>
030	Common Blanketflower / <i>Gaillardia aristata</i> cv.	090	Pinion Pine / <i>Pinus edulis</i>
031	Common Honey Locust / <i>Gleditsia Triacanthos</i>	091	Plaintain Lily / <i>Hosta x hybrida</i> cv.
032	Common Lilac / <i>Syringa vulgaris</i> cv.	092	Ponderosa Pine / <i>Pinus ponderosa</i>
033	Crape Myrtle / <i>Lagerstroemia indica</i> cv	093	Purple Coneflower / <i>Echinace purpurea</i>
034	Creeping Juniper / <i>Juniperus horizontalis</i> cv.	094	Red Maple / <i>Acer rubrum</i> cv.
035	Daffodil / <i>Narcissus pseudonarcissus</i> cv.	095	Red Oak / <i>Quercus rubra</i>
036	Day lily / <i>Hemerocallis</i> spp. and cv.	096	Redbud / <i>Cercis canadensis</i>
037	Desert Prickley Pear / <i>Opunia engelmanni</i>	097	River Birch / <i>Betula nigra</i>
038	Desert Willow / <i>Chilopsis linearis</i>	098	Russian Sage / <i>Perovskia atriplicifolia</i>
039	Eastern White Pine / <i>Pinus strobus</i>	099	Saucer Magnolia / <i>Magnoliaceae x soulangiana</i>
040	Elijan Blue Fescno / <i>Festuca ccnerea</i>	100	Scotch Pine / <i>Pinus sylvestris</i>
041	English Ivy / <i>Hedera helix</i> cv.	101	Sedum / <i>Sedum spurium</i> cv.
042	European Mountain Ash / <i>Sorbus aucuparia</i>	102	Shasta Daisy / <i>Leucanthemum x superbum</i> cv .
043	Fescue / <i>Festuca</i> spp. and cv	103	Shrubby Cinquefoil / <i>Potentilla fruticosa</i> cv.
044	Firethorn / <i>Pyracantha coccinea</i> cv.	104	Snapdragon / <i>Antirrhinum majus</i> cv
045	Flowering Crabapple / <i>Malus</i> spp. and cv.	105	Southern Magnolia / <i>Magnoliaceae grandiflora</i>
046	Flowering Dogwood / <i>Cornus florida</i> cv.	106	Spreading Cotoneaster / <i>Cotoneaster divaricatus</i>
047	Flowering pear / <i>Pyrus calleryana</i> 'bradford'	107	Sugar Maple / <i>Acer saccharum</i> cv.
048	Fountain Grass / <i>Pennisetum ruppelia</i>	108	Sweet Alyssum / <i>Lobularia maritima</i>
049	Fruitless Mulberry / <i>Morus Alba</i>	109	Thornless Honeylocust / <i>Gleditsia triacanthos inermis</i> var.
050	Garden Verbena / <i>Verbena x hybrida</i> cv.	110	Tulip / <i>Tulipa</i> spp. cv.
051	Ginkgo, Maidenhair Tree / <i>Ginkgo biloba</i>	111	Tuliptree / <i>Liriodendron tulipifera</i>
052	Glossy Abelia / <i>Abelia x grandiflora</i>	112	White Ash / <i>Fraxinus americana</i> cv.
053	Hall's Japanese Honeysuckle / <i>Lonicera japonica</i> 'Halliana'	113	White Fir / <i>Abies concolor</i>
054	Heavenly Bamboo / <i>Nandina domestica</i>	114	White Oak / <i>Quercus alba</i>
055	Hybrid Tea Rose / <i>Rosa</i> spp. <i>Class Hybrid Tea</i> cv.	115	Winged Euonymus / <i>Euonymus alatus</i>
056	Indian Hawthorn / <i>Rhaphiolepis Indica</i>	116	Wintercreeper / <i>Euonymus fortunei</i> cv.
057	Japanese (Flowering) Quince / <i>Chaenomeles speciosa</i> cv.	117	Yaupon Holley / <i>Ilex vomitoria</i>
058	Japanese Black Pine / <i>Pinus thunbergiana</i>	118	Yew / <i>Taxus</i> spp. and cv.
059	Japanese Holly / <i>Ilex crenata</i> cv.	119	Zinnia / <i>Zinnia elegans</i>
060	Japanese Maple / <i>Acer palmatum</i> cv.		



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Design Scoring Rubric

NAME _____

CHAPTER _____

CRITERIA		Points Possible	Points Earned
Graphics	Eraser Marks/Smudges	20	
	Clear Graphics	20	
	Use of Symbols	20	
	Drawing to Scale	20	
	Labels	20	
	Section Total	100	
Written Explanation	Explanation is clear	20	
	Explanations Legible/Gramatically correct	20	
	Overall Analysis and Explanation	60	
	Section Total	100	
Site Analysis	Customer Wants/Needs Addressed	10	
	Scale Infraction	10	
	Proper Bedding of Plant Types	10	
	Elements Placed Correctly	10	
	Correct North/South Label	10	
	Overall Analysis Accuracy and Implementation	50	
	Section Total	100	
Plant Palette	Plants Drawn to Mature Size	15	
	Plants Named Correctly	15	
	Names in Block Lettering	15	
	Number of Plants per Species	15	
	Organic/Inorganic-Labeled/Separated	20	
	Plants are Adaptable to New Mexico Hardiness Zones	20	
	Section Total	100	
Concept	Does the Design Meet the Clients Needs?	30	
	Creativity	20	
	Overall Design Concept	50	
	Section Total	100	
Total Points		500	