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Desert Landscape Project & Water Conservation

Landscape Architect Instructions

Greetings desert landscape architects! You have been contracted to change a client's yard from a high water-use grass lawn into a water-efficient desert landscape or "xeriscape". The client's neighbors have a "xeroscape" yard, which is simply rock and no plants or grass. Your client wants a lush desert environment to surround their home and absolutely do not like their neighbor's yard.

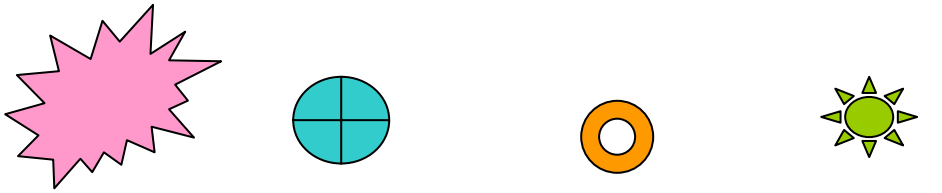
Your must help the client become eligible for the local water conservation rebate program, which will reimburse the client up to $2.00 per square foot of front yard from which grass is removed and converted to desert landscape. In order to get the rebate you must choose desert-adapted plants or native plants for your client that will cover up to half or 50% of the front yard. Each plant has an estimated plant coverage value, based upon its mature height and width. Please view the additional Plant Coverage Value Page to find these estimates for different plants.

You must also help your client estimate the amount of water they will save by removing their grass lawn and planting native plants and desert-adapted plants in the landscape.

Getting Started

To convert the grass lawn in your client's front yard to desert landscaping, you must first research desert-adapted plants and native plants of the Mojave Desert. Try visiting the U.S. Department of Agriculture website **http://plants.usda.gov** to look for photos of the plants listed on the Plant coverage Value Page. Sample landscape designs can be found at the Southern Nevada Water Authority's website **http://www.snwa.com/html/land_designs.html**.

You must make a landscape design on a large poster-board and include a colored key with symbols for each different plant. Below are examples of plant symbols that can be used in the architectural drawing. Make sure that symbols represent the approximate plant sizes as well.



TREE **SHRUB** **GROUNDCOVER** **CACTUS**

The plant coverage values for the plants that you choose must add up to 50% of the area of the grass lawn that will be converted to desert landscape (Plant coverage values are for full-grown plants). Plants you have chosen for the design and the quantity of each, along with the plant coverage values can be recorded on the plant coverage worksheet.

The drawing of the client's front-yard can include a drive-way and/or patio or walking path to the front door. The patio and driveway do not count as part of the area of grass that will be converted to desert xeriscape. The entire area of the front yard (including the patio or driveway) must be greater than 1000 square feet. This can be visualized as a front yard that is approximately 31 feet long by 31 feet wide. The font yard does not have to be square, but can be rectangle or a

combination of many shapes to accommodate for the driveway, patio or walking paths. Remember that you will need to calculate the area of the grass lawn in for the front-yard layout before beginning the project. This will ensure that your client reaches the 50% plant coverage goal of the local water conservation rebate program.

Your design must be drawn to scale. 1 inch on the poster board drawing = 2 feet in the actual landscape. When you select the plants for the landscape, the total plant coverage for all of the plants combined must add up to 50% or half of the area of the grass/front yard. Example: The area of your front yard is 1000 square feet. So the plant coverage of all the plants you have chosen must add up to 500 square feet. You can use the plant coverage worksheet to list the plants you have chosen. You must have at least 8 different plants in your design.

Water Conservation

Calculate the amount of water which will be saved each year by removing the grass lawn and replacing it with drought-tolerant or low water use desert landscaping.

1 square foot of turf uses 79 gallons of water per year
1 square foot of xeriscape uses 17 gallons of water per year

a. Total gallons of water used per year with a grass lawn
   = (Area of the grass lawn x 79 gallons of water)

   _____

b. Total gallons of water used per year with xeriscape
   = (Area of backyard x 17 gallons of water)

   _____

c. Total gallons of water saved each year
   = (Gallons of water used by grass - Gallons of water used by xeriscape)

   _____

d. How much money will the client receive for the local water conservation program landscape conversion rebate? ($2.00 per square foot of grass lawn converted to desert xeriscape).

   _____

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Plant Coverage Worksheet

What is the area of the client's grass lawn? _____ ft^2

What is the area you will need to cover with plants? _____ ft^2

Plant Name	Coverage Value	Quantity	Total Plant Coverage Value