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***Small Scale Garden  
Challenges***



# *Pre-assessment*

1. Concerning flowers (select all that are correct):
  1. All are edible
  2. Some are edible
  3. Some are edible but bad tasting
  4. Most are highly nutritious
2. Double potting:
  1. Makes a potted plant hotter
  2. Conserves water
  3. Encourages pollinators
  4. Causes plants in the pots to develop chilling injury



# *Pre-assessment 2*

3. One gallon of water weighs \_\_\_\_\_ lbs.
4. If a pot does not have drainage holes, then the gardener should place rocks in the bottom, then soil and plant (true/false).



# ***Small Scale poses some difficulties***

- Most local homes have relatively small spaces for plants
- Desert sun can be intense
- High temperatures can be exacerbated by rock mulch reflecting sunlight
- Low humidity is a challenge for many plants
- Sun direction makes a world of difference
- Some plants do not grow well in containers
- Irrigation is critical; can't depend on rainfall
- Our soil is frequently compacted



# *What kind of small space are we looking at?*

- Patio
- Small yard
- Narrow balcony
- Shared by several households
- How much space is usable



# *What will the space be used for?*

- Outdoor dining
- Company
- Kids
- Pets
- Handicapped accessibility



# *Wide range of possibilities, nonetheless*



- Edible plants can be very ornamental
- Ornamental plants can be very tasty
- Both should be in a garden
- Desert plants are hardy, but necessarily happy in containers
- Shade is a welcome addition

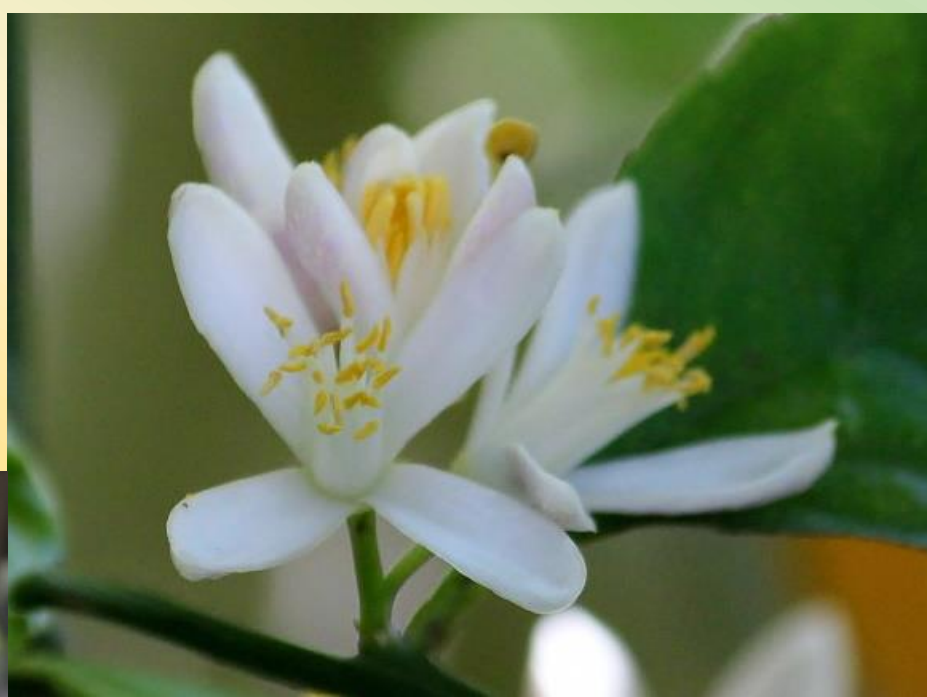


*Edible flowers  
– some should  
not be taken  
in large doses*





*Still Edible*



*Some things will grow in amended soil, but*





*Growing in soil is rarely  
easy in the Mojave*

Consider containers

- Raised beds
- Barrels
- Ornamental pots
- Recycled containers of all sorts



Build them to meet the size, height and mobility needs of gardener. Many materials are suitable, but not all Think about plants growing in a metal container Think about June, July, August

# *Raised beds*



*Not all materials survive, such as plastic*



# *Raised beds*

- Materials appropriate for climate
- As high (deep) as you need



# *Big yields, little space*







# Materials



## Plastic –

- Can look like almost any material
- Holds water well
- Low cost
- Might not last in very dry climate
- Select thicker walled plastics

## Wood

- Good drainage
- Rustic appearance
- Can be expensive





# *So many things grow in containers!*





# Clay pots

If completely glazed,  
do not dry out faster  
than other materials

**Appealing** but

- Heavy
- Breakable

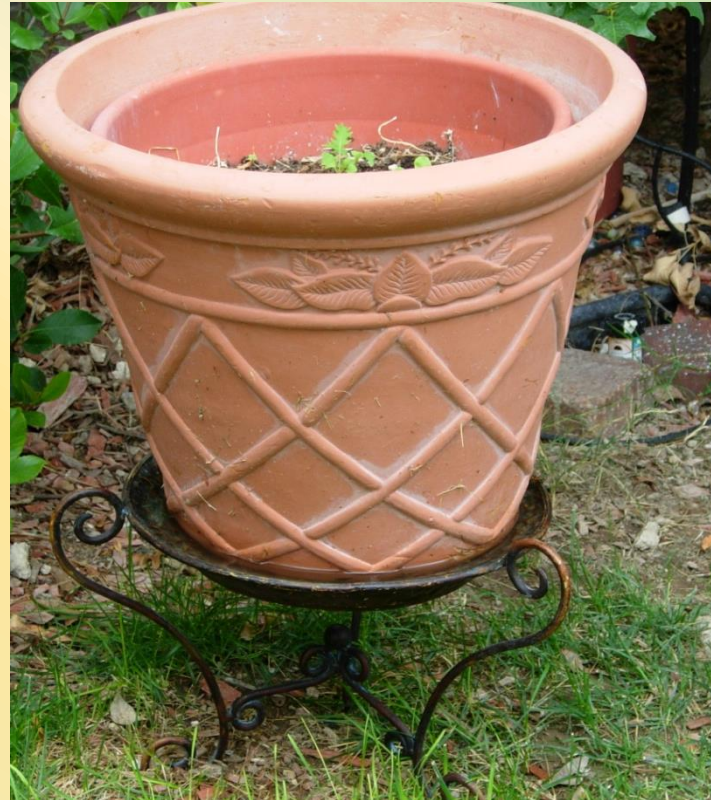
if unglazed:

- Dry out quickly
- Salts leach
- Unglazed clay can desiccate



# Other materials

- Such as condensed foam
- Can look like decorative clay without the weight or cost
  - Can be thicker-walled than plastic for better insulation



# *Dealing with our environment*

- Even a small space can have excellent growing conditions
- Pots do not need to be boring



# Double potting

- Conserves water
- Insulation
- Moderates heat or cold



# Hanging Pots

Dry faster than sitting

Smaller dry faster than  
larger

Clay faster than plastic or  
glazed



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# *Planting in bags*



# *Consider growing UP*

Trellises can be useful  
for many climbing  
plants

Much less horizontal  
space needed



# *Trellises vary*



# Ultimately, Containers

*Express the gardener's taste*

- Eclectic
- Sophisticated
- Rustic
- Urban
- Antique



# It boils down to

## What do you want

- *To grow*
- *To eat*
- *To see*



# *What plants can be in small, hot gardens?*

- Ornamentals - roses, desert natives, many herbs, throughout the year
- Edibles (differ with the seasons)
  - okra, sweet potatoes, melons, squash, peppers, eggplant – will generally grow through the summer
  - Tomatoes – will grow until early summer, but then will frequently fry on the vine
  - Beets, chard – to early summer, and sometimes through the summer
  - Green leafies (spinach, lettuce, kale) prefer cool temperatures (spring & fall)



# *When watering by hand*

- Consider a smaller, lighter watering can
- 1 gallon of water weighs 8.8 lbs.
- A full 2 gallon can weighs 17.6 lbs. **plus** the weight of the can itself



# *Hoses vary*

- They come in different weights
- Which can you easily carry?





# *Drip irrigation to pots*



# *Whose aesthetic?*

- Formal
  - Casual
  - Edible
  - Eccentric
- 
- The choice will determine plant materials, spacing, etc. as well as furniture



# Choices

- A few large plants with seating
- Several small plants around space
- A mix of large & smaller containers
- Elevation – is there space to hang plants?

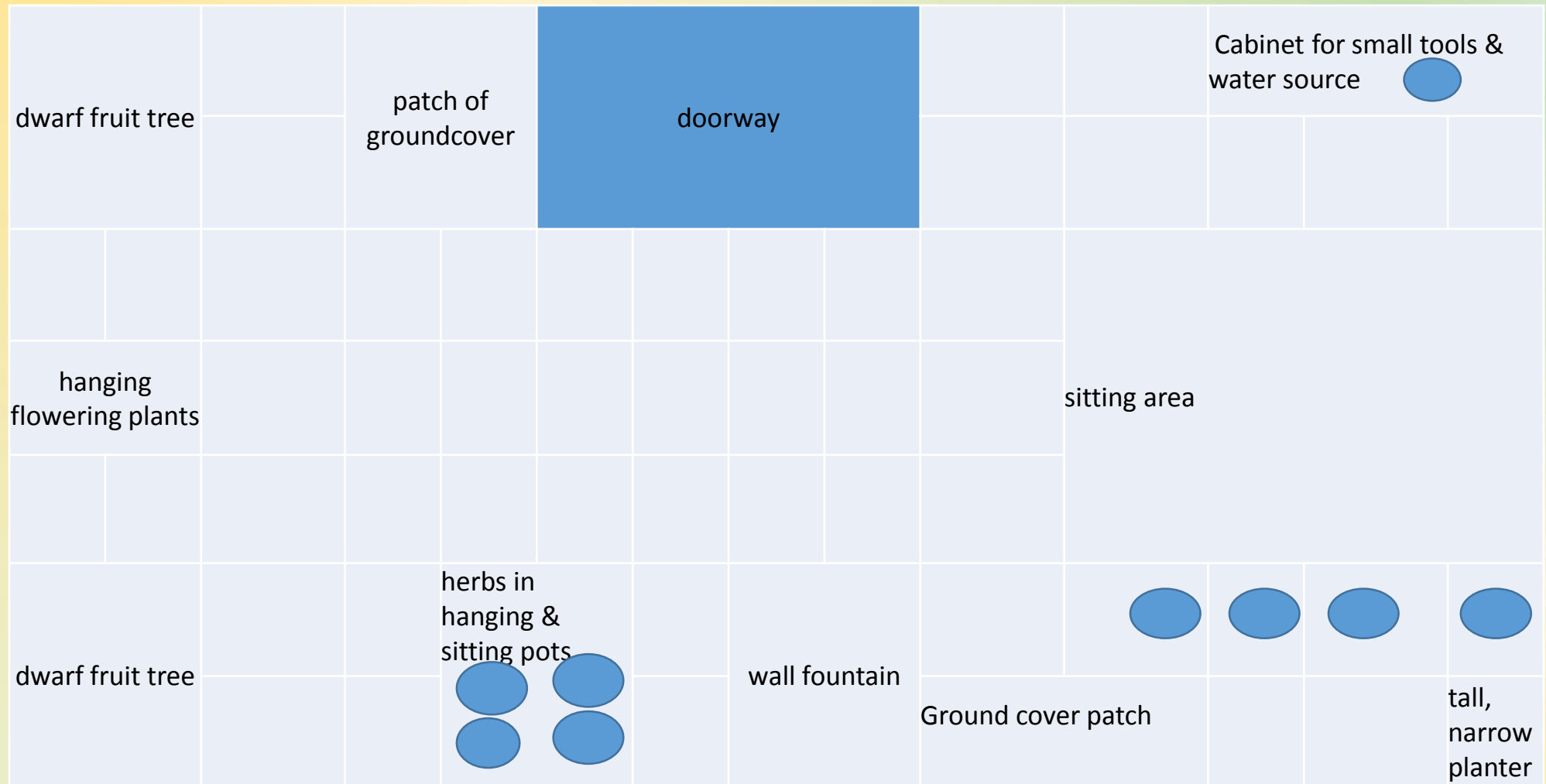


# *A garden does not need to have turfgrass*

Think about low containers of groundcovers



# A 7' x 14' area



*Why not rocks?*

A weighty question



# *Rocks used to be recommended*

- To place in the bottom of a growing pot
- In the bottom of a planting hole
  
- Why isn't that recommended anymore?



# *Take a look*

A planting pot has a limited amount of space for the root system to develop.





# *Simple pot*

- Plastic
- Solid
- 8" diameter
- Volume ~ 400 in<sup>3</sup>
- Drainage holes at the bottom



# *Simple pot with rocks*

- If rocks are added, one inch deep
- Drainage holes might be blocked
- Volume decreases
- New volume  $\sim 350 \text{ in}^3$
- Less medium for plant
- Weight increases by weight of rock



# *What if there's no drainage in pot*



- Can rocks substitute for drainage holes?
- Wouldn't water flow down into rocks and save the plant from drowning?



# Swampy

- Rocks on the bottom of a planter without holes will not act in lieu of drainage
- Water moved soil through rocks to bottom, where mud develops
- A mess at the bottom of the pot
- Plants cannot grow in muddy airless conditions
- Pot often is damaged





## *Better choice*

- Use the pretty pot to hold the plain one!
- You can place rocks in the bottom of the ornamental one
- Place the plain pot within the ornamental one
- This will increase humidity around the plant.





***Thank you for your attention!***

