



Start where you are! Learning and preparing your site

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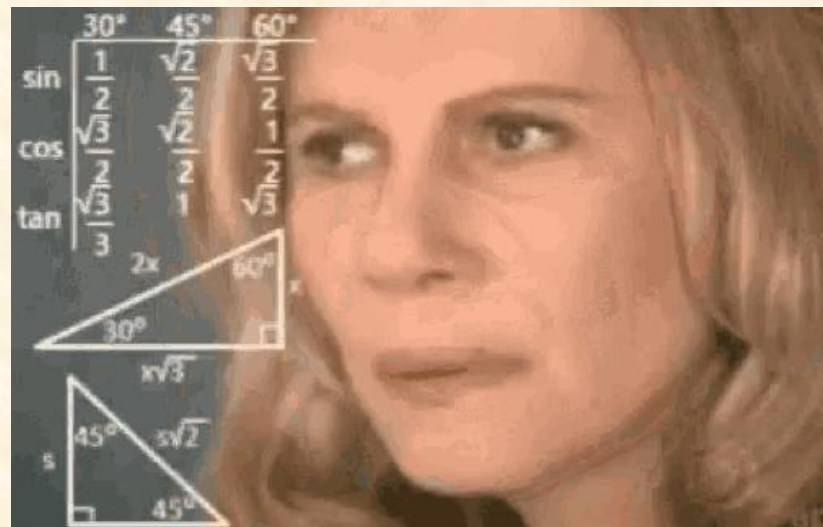
Outline

- Looking around your space
 - Light
 - Water
 - Soil
- How to prepare
 - Kill turf
 - Bed prep



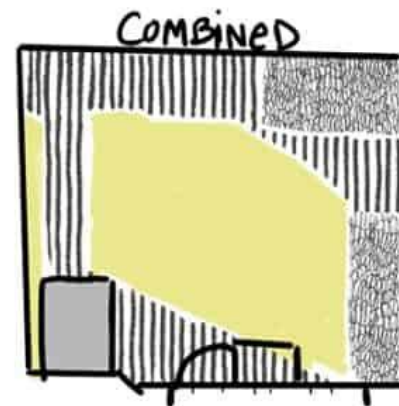
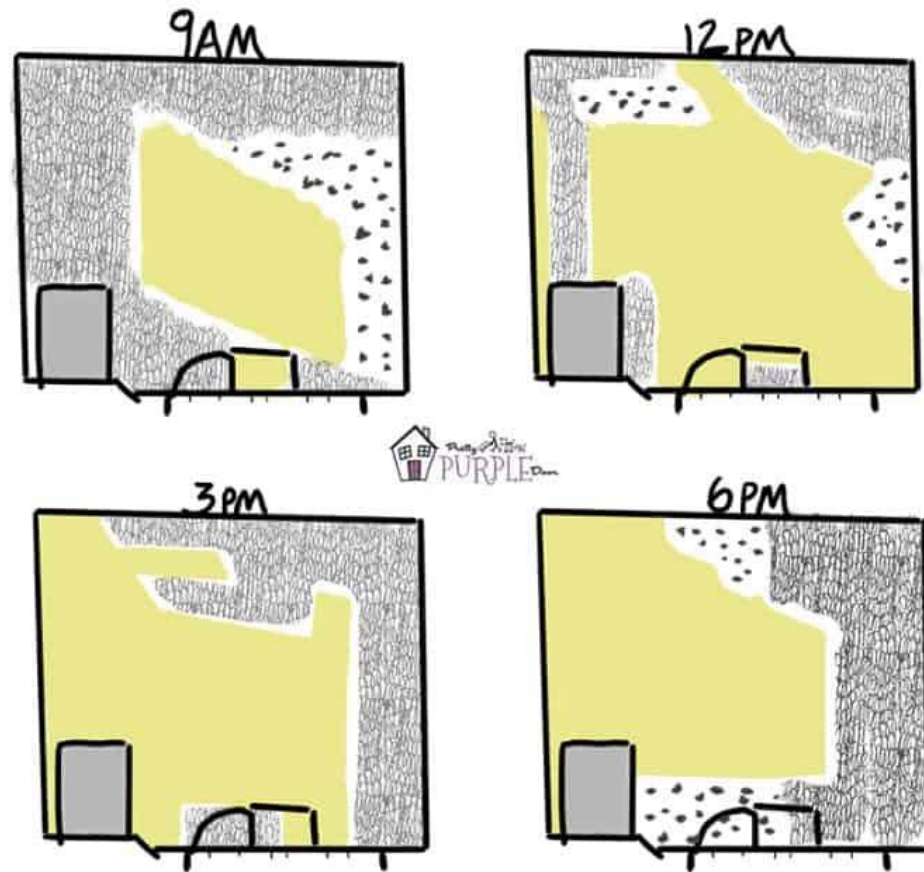
Where to start?

- What does it have?
 - Already have lots of natives?
 - Non-natives galore?
- How much sun?
 - Or how little?
- Water- Standing water?
- Soil type



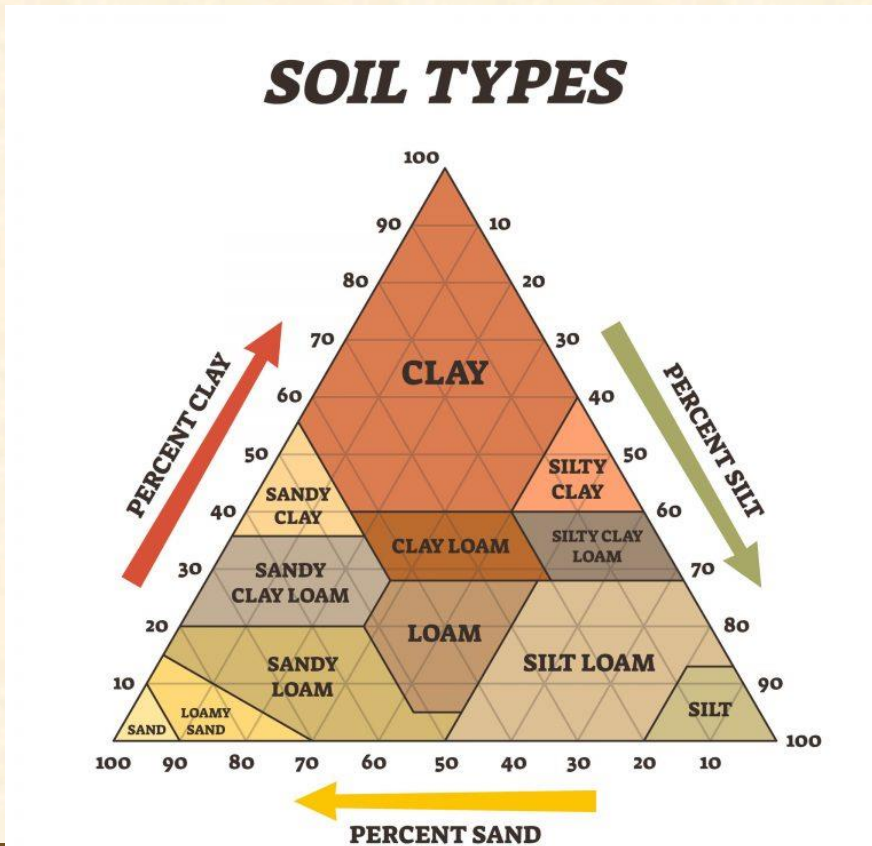
Sunlight definitions

- Full sun
 - 6+ hours of direct sunlight
- Part sun
 - 4-6 hours of sunlight
- Part shade
 - 2-4 hours of sunlight
- Full shade
 - Less than 2 hours of sunlight



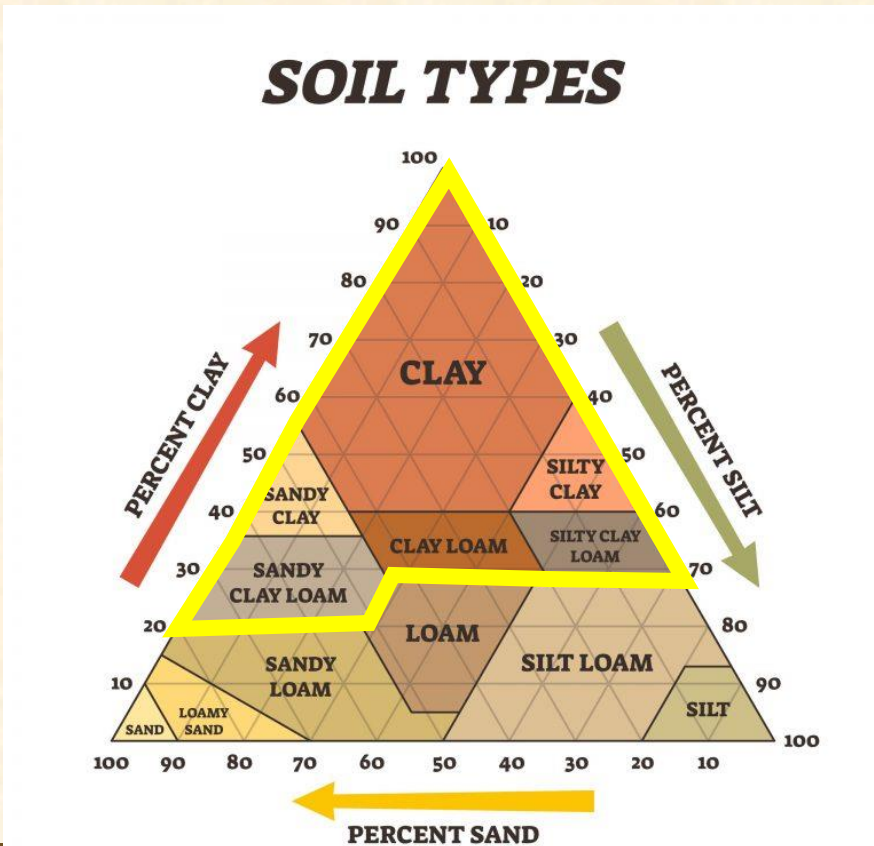
Water, soil texture, and moisture-holding capacity

- Clay
 - Smallest particle
- Sand
 - Largest soil particle
- Silt
 - Second largest particle

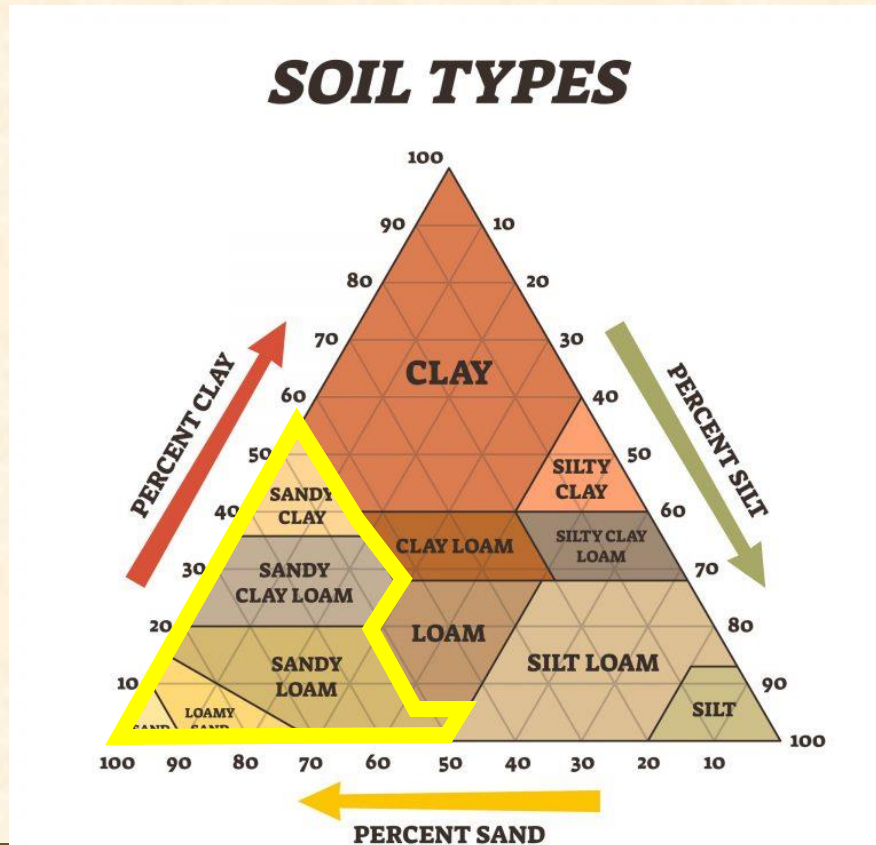


Water, soil texture, and moisture-holding capacity

- Clay
 - Soil holds nutrients and water
 - Longer to drain
- Determine in the field
 - Feel sticky when wet and crumbly when dried
 - Usually determined if in soil by an overwhelming feeling of grit or smooth texture

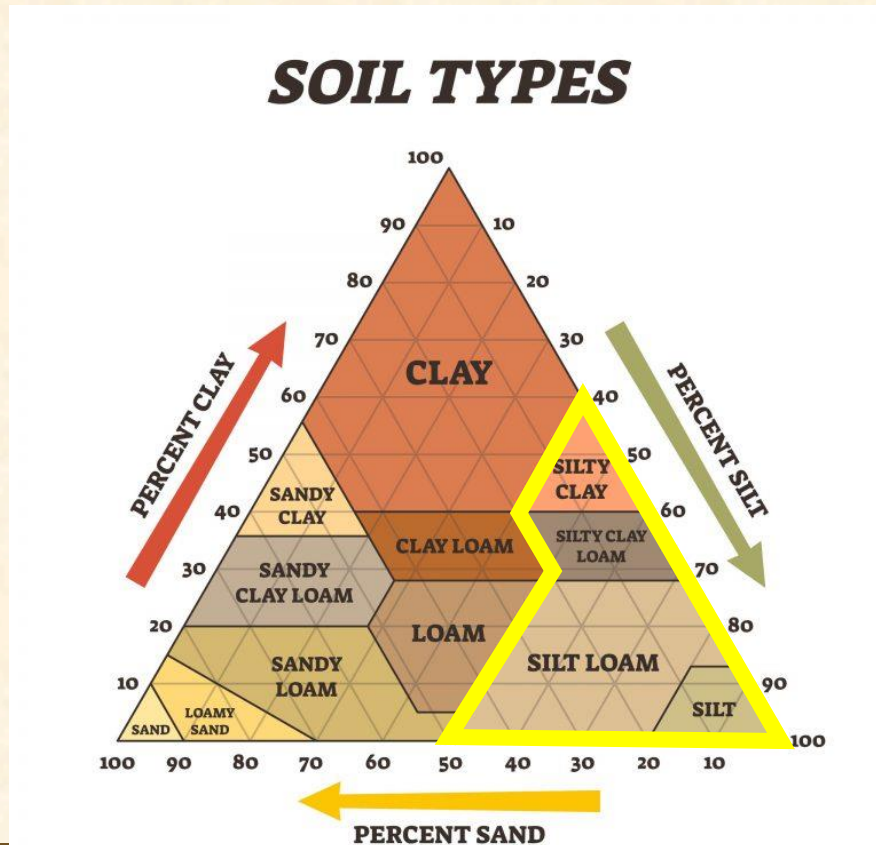


Water, soil texture, and moisture-holding capacity



- Sand
 - Soil holds fewer nutrients and water
 - Dries out faster
- Determine in the field:
 - Gritty feeling between fingers
 - Can sometimes see the particle size

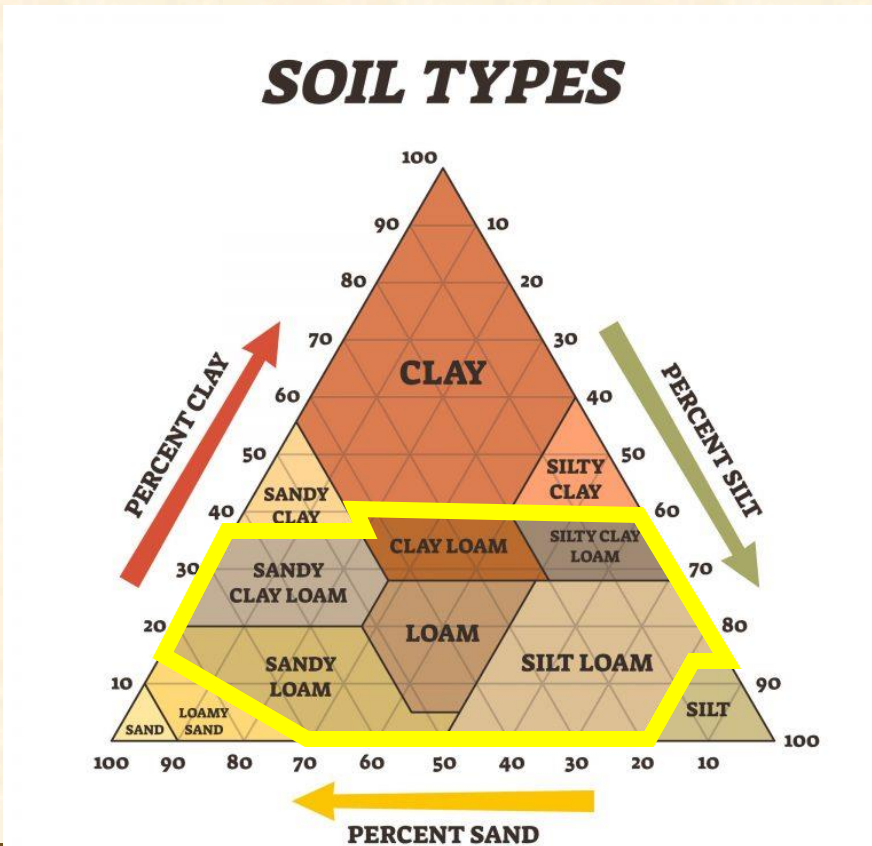
Water, soil texture, and moisture-holding capacity



- Silt
 - Holds nutrients and water well (but not as much as clay)
- Determine in the field:
 - Will feel silky/smooth
 - Flour-feeling

Water, soil texture, and moisture-holding capacity

- But what about loam soil?
 - A combination of sand, clay, and silt
 - Well-balanced



How can you tell?

- Ribbon method

No ball forms	Sand		
No ribbon forms	Loamy sand		
Less than 1 inch	Sandy loam, silt loam, loam		
1 to 2 inches	Sandy clay loam, silty clay loam, or clay loam		
Over 2 inches	Sandy clay, silty clay, or clay		



How can you tell?

- Mason jar method
 - Gather sample (about 8 in down) without large sticks, roots, or rocks
 - Fill jar about third of way full
 - Add 1 teaspoon of dish soap and top rest of jar almost to top with water
 - Leave small gap
 - Seal tightly and shake for 3 to 5 minutes
 - Let it settle
 - 1 minute: mark where heaviest particles settle on bottom (sand)
 - 2 hours: mark middle layer for second heaviest (silt)
 - 24 -48 hours: mark where top layer settles (clay)
 - Measure height (cm) of each layer and calculate percentage of each
 - Example: total soil height is 10cm and bottom layer is 5cm
 - 50% is sand



Soil pH: why it matters

- pH
- Mineral and nutrient uptake
- How to test!



- pH 3-5
 - Calcium, potassium, magnesium, and copper more soluble and wash away
 - Phosphates lock up and unavailable (most plants)
 - Acidic sandy soil- lack trace elements
- pH 5.1-6
 - Ideal for rhododendrons, camellias, and heather
- pH 6.1-7
 - Moderately acidic
 - 6.5 best general purpose for most gardens
 - Higher availability of major nutrients
- pH 7.1-8
 - Phosphorous availability decreases
 - Iron and manganese become less available

Goals with your landscape in mind

- Native plants only?
- Wildlife habitat?
- Rain garden?
- Lower maintenance?



Image from <https://www.recbound.com/blog/example-smart-goals-for-recruiters>



Example of SMART Garden Goal

- **Vague goal:** I want to build a beautiful flower garden
- **SMART goal:** I will plant a cutting garden with native flowers



What *exactly* are you trying to achieve?

How will you know when you've achieved it?

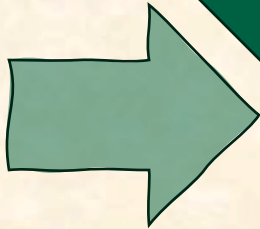
Is it genuinely possible to achieve it?

Does it contribute to your agency's revenue growth?

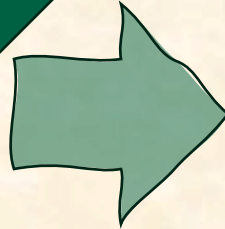
When do you want to achieve this by?



Cut grass;
Outline bed



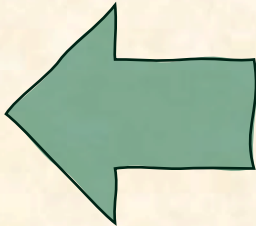
Cut
trenches
4-6in



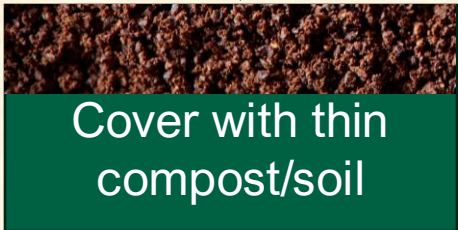
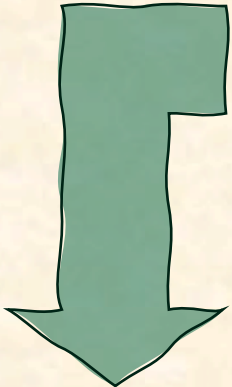
Remove
undesired plants



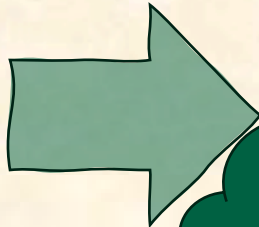
Layer heavy
cardboard where
outlined



Cover with mulch

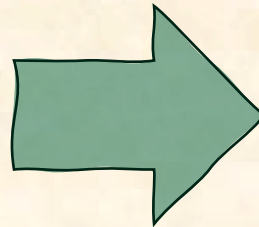


Cover with thin
compost/soil



If now:
cut
holes to
plant

If later:
breakdown
over time
and soften



Water

Where to find plant information

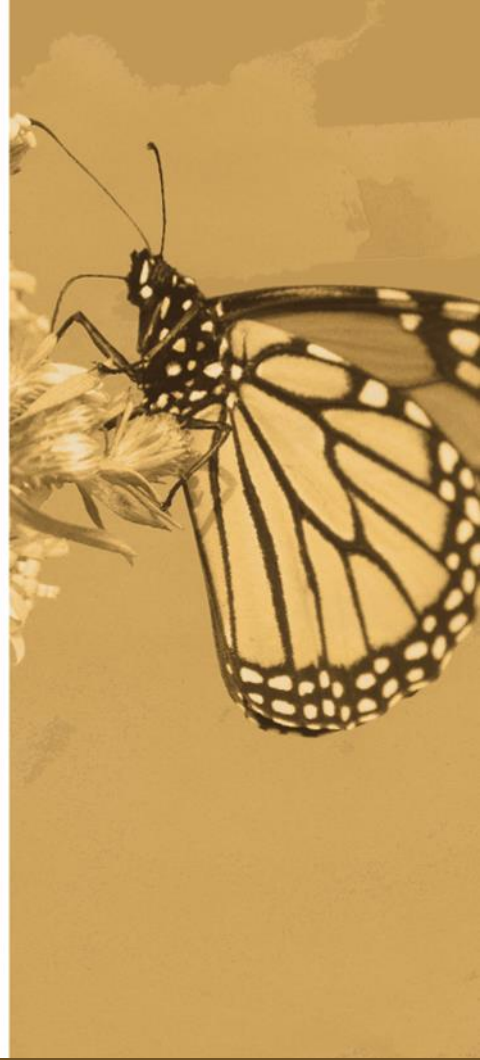
- Web resources

- Missouri Department of Conservation
 - <https://mdc.mo.gov/>
- Missouri Botanical Gardens Plant Finder
 - https://www.missouribotanicalgarden.org/plantfinder/plantfinders_earch.aspx
- Lady Bird Johnson Wildflower Center
 - <https://www.wildflower.org/plants/>

- Professionals

- Local MDC office
- Missouri Botanical Gardens Center for Home Gardening
- KMOX Garden Hotline





Questions?

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