SOIL PREPARATION WORKSHOP

Agenda – Feb 25th

8:30 - 9:00 - Sign-in and Arrival, Refreshments,

9:00 – 12:00 – Introductions, Discussion and Hands-on Demonstration

* + Amendments / Nutrients
	+ Double Dig
	+ Waffle Gardens
	+ Raised Beds

12:00 – 1:00 Lunch time

1:00 – 1:30 Prepping Soil to plant Sweet Peas

1:30 – 2:00 Plant Sweet Peas

2:00 – 2:30 Reflection and Discussion

Items Needed to Facilitate:

* Healthy, Nutritious Refreshments
* Sign-In Sheet
* Tools

 → 10 Shovels

 → 2 Wheelbarrows

 → 4 Rakes

 → 6 Hoes

 → 2 Digging Forks

 → Roll of String

 → 10 Stakes

* Truck-full of Manure
* Compost at Site
* 1 box Bonemeal
* 1 box Bloodmeal

Budget for Workshop:

 $125

What Participants Should Bring:

* Close-toed Shoes
* A Hat
* Water Bottle
* Notebook if Needed

Step-by-Step Instructions:

8:30 - 9:00 - Sign-in and Arrival, Refreshments.

Description: Make sure that you have a sign-in sheet, set up a table to greet people as they arrive to the workshop. Refreshments – provide healthy nutritious food and beverages.

9:00: Introductions:

 - Introduce yourself and the purpose of the workshop.

 Purpose: The purpose of this workshop is to teach people how to observe the space that you want to plant, be able to decide which soil preparation methods would be most efficient and have the ability to implement those methods.

* + Have everyone introduce themselves and state why they are here and what they want to learn during the workshop.

9-ish – 12:00: Discussion and Hands-on Work:

 → The discussion of each method will come before starting the method. Each step will first be explained, and then the group will work on completing the step (unless otherwise noted).

Getting Started Announcements:

* + We want to be mindful of where our water comes from and how much sun our plot gets.
	+ Disclaimer: If you're creating a garden, you want to know about your space. If there is reason for concern, grow sunflowers on the spot for a year – or grow in containers/raised beds instead.

Amendments / Nutrients:

 Our most used amendments are compost and manure. Other amendments include: blood meal, bone meal, fish emulsion. When using manure, be sure that the manure you are using has sat for at least 90 – 120 days. 90 days for corn, chile, tomatoes (fruiting crops), and 120 days for roots and greens. This is to prevent bacteria from forming and to the 'burning' of crops. It is good to use process manure or manure that has been composted because it will contain less invasive seeds.

 Different types of manures are better than others. Goat/sheep/rabbit/chicken manure are high quality. Horse/cow are lower quality but still really good.

Different Methods:

People have been preparing the soil for 1000s of years, with different methods and techniques. Ultimately you create a relationship with the land and the earth in which you steward. We want to honor the fact that there are many ways to prepare the soil. We would like to present different methods so you may be able to decide what you like and what works best for you.

 Double Dig:

 The double dig method is a gardening technique used to increase soil drainage and aeration.

**Steps:**

* + 1. Mark the area where you will prepare the soil – Use string and stakes to mark out three foot wide rows by however long we want to make the row. This assists in ensuring the row is straight and that you know where to begin and where to end. By having 3 ft rows double dug it will ensure nutritious and well aerated soil for healthy crop growth.
		2. Water area prior to the day you want to prepare the soil. This makes it so that the process is easier. (mention that this was done already a few days ago).
		3. Remove organic matter and plants from area. Bring this material to the compost and it will eventually become nutritious soil that will then be brought back to the garden beds.
		4. Lay an inch of compost / manure over the marked row.
		5. We will begin by removing 12x12 inches of soil from our marked row. Put the removed soil in a wheelbarrow or buckets (it will be used later to complete the process). This is our first section.
		6. Loosen up the soil in the section you just removed with a digging fork /shovel.
		7. Add a little bit of amendments to this section.
		8. Now remove the next 12x12 section of soil and place it in the first section.
		9. Repeat until you reach the last section.
		10. Once you've added a little bit of amendments and loosened up the soil of the last section, put the saved soil from the first section (in wheelbarrow or buckets) into that section.

Waffle Prep:

 Waffle gardening is an indigenous agricultural method of the southwest. The concept is to create waffle-like basins in the soil for water retention. Waffle size depends on what you're growing and how much space you have. Certain crops need certain amounts of space, it depends on the plant and your soil nutrition.

**Steps:**

* + 1. Determine what area you want to plant and what crops you are going to be planting. The design of the waffle will depend on this.
		2. Mark out the area where you want to create a waffle.
		3. Using a hoe, build up a perimeter at least 6 in high. The size and height of the perimeter will depend on the size of your waffle. Small waffles will have smaller perimeters than large waffles, which may use the perimeters as a place to walk.
		4. Compact the perimeter with your hands and feet (it depends).
		5. You can do the double dig method within each waffle or add in amendments and aerate your soil using tools or a tiller.

Raised Beds:

 Raised beds are versatile. They are useful if you have very poor or contaminated soil and can be made on rooftops, balconies, or pretty much anywhere. The concept is to create a container that holds nutritious soil.

 We created raised beds so elderly people and people who are unable to bend down for crop maintenance can garden.

 If you're building raised beds, you can use a variety of materials like lumber (certain types of wood last longer than others), hay-bales, horse troughs, old swimming pools, stone, adobe, and even bathtubs. You can even recycle old 5 gal buckets and tires (disclaimer, use discretion – tires may leak petroleum) to use as containers.

 When filling your raised beds think about what you can do to create efficient drainage. For example, adding a 2 ½ in. layer of gravel/rock helps not only with drainage but makes it so that you don't have to add as much soil. For buckets, make sure you drill a couple holes at the bottom for drainage.

**Steps:**

1. Begin layering the beds. Put a 2 ½ in layer of gravel/rock. Add a layer of soil, enough to cover the rock layer.
2. Layer nutrients according to what you're growing. With greens and root crops, the nutrients should go in the uppermost layers. Fruiting crops have deeper root systems so you can implement nutrient layers deeper down in the soil.
3. Mix ¾ amount compost to ¼ amount manure in a wheelbarrow or container. Use this as filler for beds.
4. You can do the double dig method if you want.
5. If beds are already filled, turn soil and mix in amendments.

12:00 – 1:00: Lunch Break

1:00 – 1:30: Prepare Soil for Planting Sweet Peas

1:30 – 2:00: Plant Sweet Peas

2:00 – 2:30: Reflection and Discussion:

Reflection Questions:

* + Why is it important to prepare the soil before you plant?
	+ How do you decide which preparation method to use?
	+ What can you do to the soil to facilitate healthy conditions?