

Soil and Planting Section

Trainer Outline

Section Theme

This section introduces soil: what it is, what it does and how to keep it fertile.

Participants will

- learn types of soil and how to work with soil and prepare it for planting.
- learn about the essential garden tools for school gardens.
- learn how to prep a bed for planting.
- learn about seeding methods, transplanting, and the care of seedlings.

We finish by making paper pots and planting a seed.

Logistics

Time: 50 minutes

Location: Garden

Workshop Goals addressed:

- Become comfortable with basic gardening skills

Handouts:

- Soil and Bed Preparation
- The Nitty Gritty Activity
- Basic Garden Tools
- Garden Bed Types
- Seeding and Transplanting
- Making Paper Pots

Gardens for Learning pages:

- Planting Your School Garden, 55 – 64

Materials:

- **For soil and bed preparation**
 - Soil samples
 - Demonstration “Nitty Gritty” jar (see handout)
 - Tools: trowels, digging forks, soil rakes, hula hoe, spade
 - Garden bed cleared and ready for bed preparation activity
 - Compost in various stages
- **For seeding**
 - Various containers for seeding techniques (flats, yogurt containers, etc.)
 - Potmaker molds, paper, scissors, milk cartons, labels and pencils
 - Tray to hold paper pots
 - Seeds and seed starting mix
 - Watering implements: watering can and hose with fan attachment
- **For transplanting**
 - Trowels
 - Sowing string (string with marked spacings)
 - Transplants

Introduction to Soil

(Discussion and demonstration)

Handout: Soil and Bed Preparation

Start with a moment for soil appreciation. Have everyone take a handful of soil from the bed you will work and hold it, touch it, feel it, smell it. Key points to make are:

- This is where it all starts.
- What's in soil?
- Healthy plants depend on healthy soil.
- Healthy soil → healthy plants → healthy people
- Soil is alive!

Soil composition and attributes

Explain soil composition and soil texture. To guide and illustrate this discussion, show separated soil textures from the Nitty Gritty jar. If possible, have touchable samples of clay, loam and sandy soils. Discuss how soil texture relates to water-holding and nutrient-holding capacity. Introduce the idea of getting a soil test for new garden sites.

Keeping garden soils fertile

Discuss soil fertility and the three main ways of feeding the soil:

- Compost
- Cover crops
- Addition of other amendments

Give a brief explanation of using compost to increase the soil's organic matter and show compost in various stages of completion. Discuss other soil amendments. Describe cover cropping and give examples of easy cover crops for school gardens.

Preparing Soil for Planting

(Discussion, demonstration and activity)

Handouts: Basic Garden Tools, Garden Bed Types, Soils and Bed Preparation

Demonstrate tools and methods for preparing a garden bed for planting. Briefly review garden bed types: Cover points in Soil and Bed Preparation handout:

- Pre-irrigating
- Preparing soil
- Single digging a bed (You may want to cover double digging—see handout).

Have the group prepare a garden bed. Discuss tool options. Bed should be cleared and at the appropriate moisture level prior to this demonstration and activity.

Seeding and Transplanting

(Discussion, demonstration and activity)

Handouts: Seeding and Transplanting, Making Paper Pots (Note: You can also refer to “Vegetable Planting and Harvest Tips” in the Choosing Plants and Planting Times section.)

Seeding Outdoors: Direct sowing in the garden

Using the bed that the group has just prepared, discuss the three methods of direct sowing:

- drilling
- broadcast
- furrow

Demonstrate use of a sowing string with furrow seeding. Demonstrate transplanting a seedling into a garden bed. Show participants how to handle transplants, and have them transplant into a prepared bed. Discuss concepts of spacing and thinning. Discuss watering in and caring for young seedlings.

Transplanting

Refer to Seeding and Transplanting handout to discuss basic points of transplanting. Talk about how to know when plants are ready to be transplanted (true leaves, root ball) and how to prepare plants for transplant (hardening off, watering). Refer back to transplanting exercise in the garden if appropriate.

Seeding Indoors: Seeding in containers

Discuss the following concepts:

- Reasons to start seeds indoors: extend the season & avoid early garden pitfalls
- Types of containers that can be used for starting seeds (show examples)
- Appropriate size of container
- Limitations and constraints of seedling containers
- Seed starting mix
- Requirements for germination: moisture, warmth, and light
- Special conditions of growing seeds and caring for seedlings inside

Making Paper Pots

Refer to the Making Paper Pots handout. Demonstrate how to make an eco-pot and have the group each make a pot and plant seeds in them. Use a variety of seeds to show how different seed sizes might be appropriate for different age groups. Water in the seed.

Discuss plant labels—what to use, what to put on them, etc.