

Activity: Planting Goal: Physical Populations: All

TH Activity Plan – Preparing Soil in Raised Beds and Large Containers

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Photo by Sustain my Cooking Habit & D. Relf



ACTIVITY DESCRIPTION: Prepare soil in specialized planting areas; establish foundation for building a garden space from the ground up.

THERAPEUTIC GOALS:

Cognitive/Intellectual: Follow verbal instructions where multiple steps are involved; improve memory

Physical: Work gross motor skills; improve balance & range of motion; practice movement across uneven surfaces

Psychological/Emotional: Reduce aggression through physical movement/act of digging in soil

Sensory: Touch soil/tools for sensory stimulation; practice being outside to tolerate & experience sensory inputs

Social: Work cooperatively in a group; practice communication skills

STEP-BY-STEP PROCESS:

1. **Pre-Session Preparation:** A few weeks prior to session, conduct a soil test (available through your local cooperative extension office), with/out participant help, on each planting site to learn what amendments should be added and if the soil pH should be adjusted; conduct soil testing every three years. Remove any roots, weeds, and dead plants left from last year's garden. Test soil moisture by the hand squeezing method described in notes below. If the soil is too wet or dry, the activity will have to be postponed. If too dry, water and wait until the next day and test again. If too wet, most soils will require several days to dry. Set the compost and other soil amendments, as well as the other session materials, near planting area.
2. Facilitator begins session directing each participant to gather trowel, gloves, and other necessary outdoor wear & verbally explaining the steps for task completion.
3. Participants loosen the soil with trowels. This can be done by inserting the trowel into the soil and turning or wiggling it back & forth.
4. Participants spread a 1"-2" layer of compost over the soil surface and turn it under with a hand trowel. Repeat this process until all the material has been added.
5. Apply any remaining soil amendments, per soil test recommendations and according to label directions.
6. When all amendments have been added and the soil appears to be well mixed, the soil is ready to be planted.

Materials

Raised beds or large containers with workable soil

Digging tools, such as trowels, adjustable reach tools, ergonomic tools, tool grips

Outdoor wear: gloves, hats, aprons, sunscreen, sanitizer

Finished compost, soil pH amendments, fertilizer as recommended by soil test

APPLICATIONS FOR POPULATIONS: This activity provides meaningful group activity through which participants can work collaboratively together to accomplish soil preparation of the garden area to be planted. Digging and soil based activities offer opportunities for sensory engagement, physical movement, connection of self with the outdoors through a grounding experience, and as a strategy for managing aggression using physical exercise of digging in the soil. Group discussion of nature metaphors, such as taking time to establish, reset, and/or nourish the foundation or groundwork of relationships in order for them to thrive can be incorporated into the session. Tasks can be supervised so that all levels of abilities can participate, adjusting staff/participant ratio to suit.

SAFETY CONSIDERATIONS: Use sun protection, gardening gloves, and other seasonally appropriate outdoor gear. Offer adaptive tools and techniques as appropriate. Supervise careful handling of soil amendments and gardening equipment during activity. Based on your soil pH test, adding certain amendments, such as lime to raise the pH or sulfur to lower it, may be recommended; work these materials into the soil after the activity has been completed to avoid participants' contact with them. Wash hands and/or use hand sanitizer after completing digging activities.

NOTES OR OTHER CONSIDERATIONS: Organic matter is a great soil improver for both clay and sandy soils. Good sources of organic matter include composted manures, leaf mold, sawdust, straw. These materials can be mixed into the soil in the fall to decompose over winter, or they can be composted and incorporated in the fall or spring. If the soil is not too hard or wet, participants may be able to prepare raised beds with trowels and other handheld tools. To test the soil moisture level, pick up a handful of soil and squeeze it—see photo on right. If it stays in a tight ball and is wet/muddy to the touch, it is too wet. If it is easy to squeeze and crumbles freely, it is about right to work. Excessively dry soil is powdery and clumpy and will be difficult to work. Herbs and other plants grow well in containers or elevated beds adjusted for sitting or standing. However, soil holds water differently in these environments, so it may be best to use packaged soil. These soils are also free of insects, diseases, and weed seeds. Commercial potting soils can usually be used for three years before being replaced.



The height of the raised or elevated bed will determine if participants can sit in chairs while they work. If they will need to stand, have chairs on site so participants can rest in the shade if necessary. A mobile raised bed can be prepared and planted in shade and then moved to a sunny location.

Adjust tasks within the activity to suit the range of participant abilities. Employ task sharing, cueing, and encouraging words for participants with cognitive and fine and gross motor challenges. Have participants work in small groups of 2 or 3 in order to increase collaboration and support of others and reduce possibility of overstimulation during activity.

REFERENCES/ RESOURCES:

Edmunds, B. (2020). Raised bed gardening. Oregon State University Extension.

<https://extension.oregonstate.edu/catalog/pub/fs-270-raised-bed-gardening>

Murphy, S. (2020). Soil for raised beds. Rutgers Soil Testing Laboratory, Rutgers New Jersey Agricultural Experiment Station. <https://njaes.rutgers.edu/fs1328/>

Sawyer, J. and Weisenhorn, J. (rev. 2018). Living soil, healthy garden. University of Minnesota Extension. <https://extension.umn.edu/managing-soil-and-nutrients/living-soil-healthy-garden>

Edits were made for THAD purposes in 2023.

TH Activity Plan form developed by Lesley Fleming, Susan Morgan and Kathy Brechner (2012), revised in 2023.