Activity: Harvesting **Goal: Social** **Populations: Children/Youth**

TH Activity Plan – Hydroponic Gardening: Harvesting Produce

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ACTIVITY DESCRIPTION: Participants will harvest produce off plants growing in a hydroponic gardening system. **Number three in a 3-part hydroponic series.**

THERAPEUTIC GOALS:

Cognitive/Intellectual: Practice sequencing & following step-by-step instructions; learn basic plant care in unique growing environment

Physical: Exercise fine motor skills; sample nutritious plant-based foods

Psychological/Emotional: Practice self-regulation strategies; increase patience & wait tolerance through turn taking & delayed gratification; exercise impulse control

Social: Share harvest with others; work collaboratively within a group; increase sense of belonging through collective class growing

Materials

Hydroponic growing system planted with edible plants ready for harvesting (Juice Plus Tower Garden in photo above)

Zippered plastic baggies, 1 quart or 1 gallon size
Optional, large bowls

Safety scissors, pre-washed
Sharpie pens
Paper

Optional, printed recipes or directions on uses for produce

Optional, equity sticks for selecting small groups

STEP-BY-STEP PROCESS:

1. **Pre-Session Prep:** Grow edible plants on hydroponic growing system (see THAD activity plans Hydroponic Gardening: Seed Sowing & Planting). Check plant size to determine what is ready for harvest. Use Sharpie & paper to write a list of the plant names & the quantity of leaves/stems for each participant to harvest. Use Sharpie to write "Wash before use" on each plastic baggie. *Optional*, print off recipes or instructions on how each type of harvested plant can be prepared for consumption; fold so they will fit inside baggies. Discuss with teacher ahead of time about what to expect for the activity.
2. If working with a standard-sized class in an elementary school, divide the class into smaller groups of 5-7 participants. *Optional*, use equity sticks (popsicle sticks labeled with each student's name, one name per label) to select small groups.
3. Walk the small group to the hydroponic system & introduce the activity. Ask the group if they recall what they did in the previous session – planting seedlings. Discuss the growth of the seedlings & make the connection from how they started as tiny seeds to seedlings to harvest.
4. Explain the step-by-step instructions of harvesting. Show the paper with the harvest list. Point to each plant to be harvested, note its defining characteristics, & explain how many leaves/stems to cut; point out plants that are not ready for harvest. Demonstrate how to harvest leaves/stems off each plant. Discuss safe handling of scissors.
5. Pass out plastic baggies & Sharpies. Write participant names & the harvested plant names on baggies.
6. Open zippered baggie seal & push hand inside to ready baggies for harvest.
7. *Optional*, hand out printed/folded recipes. Discuss the recipes so participants will know to consult them on how to prepare & eat their produce at home. Place folded recipes inside baggies.

8. Hand scissors to participants. Take turns & cut leaves/stems w/ scissors. Place cut plant parts inside baggie.
9. Close baggie, remove excess air, & seal produce inside with zipper. Take home to share with family.
10. *Optional*, if keeping the harvest at the school for group sampling, place harvested produce into large bowls (to prepare for eating soon after harvest) or large baggies (if saving for later, within a couple days or so after harvest). Refrigerate until ready to use.
11. Maintain hydroponic growing system according to instructions. Add water & nutrients to the tank as needed, & check ph on ongoing basis. When cut plants like lettuce or parsley have grown & leafed back out, repeat the harvesting activity again until plants begin to flower/bolt & go to seed. At this point, start the seed sowing process over again to continue the ongoing growing & harvesting program.

APPLICATIONS FOR POPULATIONS: This activity can be delivered as part of a multi-session program in an elementary school setting for grades K-5 – seed sowing, planting the hydroponic system, and harvesting produce. (See THAD Hydroponic Gardening activity plans.) Students can learn about plant science and gardening, nutrition and growing/sampling new and familiar plant-based foods/recipes, water resources, farming and agriculture, the scientific method and observations, biophilia and the people-plant connection, and more concepts as part of school curriculum. Harvested produce can be used in other sessions, such as food sampling within the class(es) or with other classes, used in recipes and shared with school staff for an employee appreciation lunch, donated to food insecure families at the school or local food bank, taken home to share with participants' families, or sell produce and homemade goods at a school-hosted farmer's market as a fundraiser to support school gardening activities. Harvest produce towards the end of the school day, or if harvesting earlier, place produce in refrigerator until end of day and hand out to participants to take home. To increase opportunities for building confidence and social skills through peer mentorship, organize older students to guide and mentor younger students on planting and harvesting activities with hydroponic system. Older students can lead younger students or peers can work collaboratively in researching, preparing, serving, and sampling recipes that use the harvested plant materials. Growing in a hydroponic system extends indoor grow times through lengthy cold/hot seasons and offers many opportunities to tailor therapeutic goals and outcomes for different groups.

SAFETY CONSIDERATIONS: Practitioners are responsible for knowing poisonous and toxic plant materials as well as safety protocols when handling hydroponic growing system materials. Supervise safe handling of materials like scissors during activity. Monitor individuals with tendencies to place non-food items in the mouth. The practitioner should pay attention to dietary requirements of participants; consult school nurse for allergies and other considerations prior to preparing and consuming food items. Follow safe food preparation practices; wash produce before use. Practice handwashing and other sanitary practices when handling food items.

NOTES OR OTHER CONSIDERATIONS: There are many types of indoor and outdoor hydroponic growing systems available on the market. Operating a hydroponic system is not inexpensive and requires the ongoing purchase or replacement of materials and equipment, including nutrients, ph balancing kits, rock wool pods, indoor lighting systems, water pumps, timers, and hoses, often designed only for the specific growing system. Keep this in mind when making the investment on a hydroponic system. Make your selection based on available growing space, electricity, water access, budget, lighting conditions, and additional components that need to be maintained and purchased in order to keep the growing system operational. Or make your own system from locally sourced parts.

REFERENCES/ RESOURCES:

Have a Plant. (accessed 2025). Fruit and veggies. *The Foundation for Fresh Produce.*
Hoidal, N., et al. (2022). Small scale hydroponics. *University of Minnesota Extension.*

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TH Activity Plan form developed by Lesley Fleming, Susan Morgan and Kathy Brechner (2012), revised in 2025.