



Module 1: Foundations of Sustainable Agri-Food Systems & Circular Economy

Hands-On Activity: Our Micro Farm

Instructions Worksheet

Grouping: Pairs or small groups (3–4)

Time: 25-40 minutes (initial setup), weekly monitoring for growth and soil data

Safety and Precautions:

- Hygiene & PPE: Wear gloves and closed-toe shoes; cover cuts; wash hands after work and before eating.
- Compost rules: Only plant scraps (no meat/dairy/oils); keep bin lidded; avoid turning dusty/moldy compost.
- Food safety: Use finished compost in beds only; keep fresh scraps in the bin; rinse harvests; sanitize tools/scale.
- Tools & lifting: Carry trowels tip-down; team-lift heavy pots/bags; keep walkways clear.
- Water & weather: Keep water away from outlets; wipe spills; coil hoses; use sun protection; pause for extreme heat/lightning.
- Pests/chemicals/supervision: Don't touch wildlife; report stings; no pesticides/fertilizers unless teacher-approved; stay in bounds; know first-aid and hand-washing locations.

Materials:

- Cafeteria food scraps
- Compost bin or container
- School garden bed or large pots with soil
- Seedlings or seeds (e.g., lettuce, herbs, radishes)
- Soil moisture meter or ruler
- Notebook or printed data sheet
- Gloves

Objective:

Design, build, and monitor a campus “micro-farm” that closes the nutrient loop from cafeteria waste, to soil, to plants and back to the cafeteria.

Instructions:

1. Pick a spot: Find a sunny, safe location that you can check regularly
2. Start the compost:
 - Put food scraps into the compost bin
 - Add dry material (like leaves or shredded cardboard)
 - Keep it slightly damp, but not too wet
3. Prepare your planting area:
 - Set out garden bed or large pot
 - Clear away weeds or debris
 - Mix finished compost into the soil
4. Plant seeds or seedlings:
 - Follow spacing instructions on the seed packet
 - Water right after planting- measure how much water is used
5. Record your starting data:
 - Plant height = 0 cm (or measure seedlings)
 - Water use (mL)

- Soil moisture reading (or write “Dry/Moist”)
- Compost stage = “Fresh”
- 6. Check your farm each week:
 - Measure plant height
 - Record water use
 - Check soil moisture
 - Count worms (if using)
 - Write observations in the data log
- 7. Harvest & close the loop:
 - Weigh the crops you grow
 - Return any leftover plant material to the compost.
- 8. Tips for Success:
 - Keep the compost damp and mixed
 - Check plants at the same time each week
 - Protect plants from pests if possible

Skills You'll Use

- Systems thinking
- Cause-and-effect reasoning
- Agroecology in practice