DALLAS ARBORETUM
Education

Garden STEM at Home
Vermiculture

WE GROW MINDS, TOO.

OBJECTIVE:

STUDENTS WILL CREATE A HABITAT SUITABLE FOR EARTHWORMS AND CREATE
NUTRIENT RICH CASTINGS FOR THE GARDEN.

SOURCE

Project Learning Tree PreK-8 Activity Guide
Gardening Lab for Kids: 52 Fun Experiments; ISBN: 978-1-59253-904-8

BACKGROUND

One oft overlooked step in the food chain is decomposition. Decomposers like pill bugs, earth
worms and fungus are essential: they eat, digest and excrete dead plant material, returning
nutrients back to the soil for reuse by living plants.

Vermiculture, or the cultivation of earthworms, is a hands-on way to see decomposition in action, to
limit food scraps in landfill waste and to explore habitats.

INSTRUCTIONS

1. Find a plastic tub to use as your bin and drill air holes an inch or two from the top of the
container. Optional: Glue screen behind each hole to prevent escape.

2. Place several inches of shredded paper (avoid shiny paper) in the bottom of the container and
moisten with a spray bottle.

3. Add a one inch layer of dirt from the garden or a bag. If purchasing, avoid soil that contains
additional fertilizer.

4. Add a two inch layer of organic matter, including food scraps and green grass clippings.

5. Continue adding layers to fill container to up to 1/2 capacity.

6. Add one pound of red wigglers or earthworms based upon availability on your area. Cover with a
final layer of moistened paper. See link below for Texas Worm Ranch.

7. Place at room temperature out of direct sun and gently mix the compost once a week, adding new
materials using the layers listed above.

8. Harvest worm castings using the instructions linked below (EPA).

ADDITIONAL RESOURCES

Explore the Nature's Recyclers Additional Resources Guide from PLT:
https://www.plt.org/blog/activity/prek-8-activity-24-natures-recyclers/

Texas Worm Ranch:
http://txwormranch.com/

Environmental Protection Agency Worm Composting Bin Instructions:
https://www.epa.gov/recycle/how-create-and-maintain-indoor-worm-composting-bin