



PLOT ESTABLISHMENT

Objective: Establish a Lawn Lab plot by removing turf from a 1 x 1 meter patch of lawn. See other curricula in this series for additional information on siting your plot, collecting materials, encouraging public engagement, and gathering and sharing data.

Age group: Ages 10 and up, or younger with close adult supervision and participation. We have done successful plot establishment workshops with children as young as four years of age.

Time needed: 1-3 hours, depending on number of participants and type of lawn. Allow at least 30 minutes for cleanup and documentation at the end.

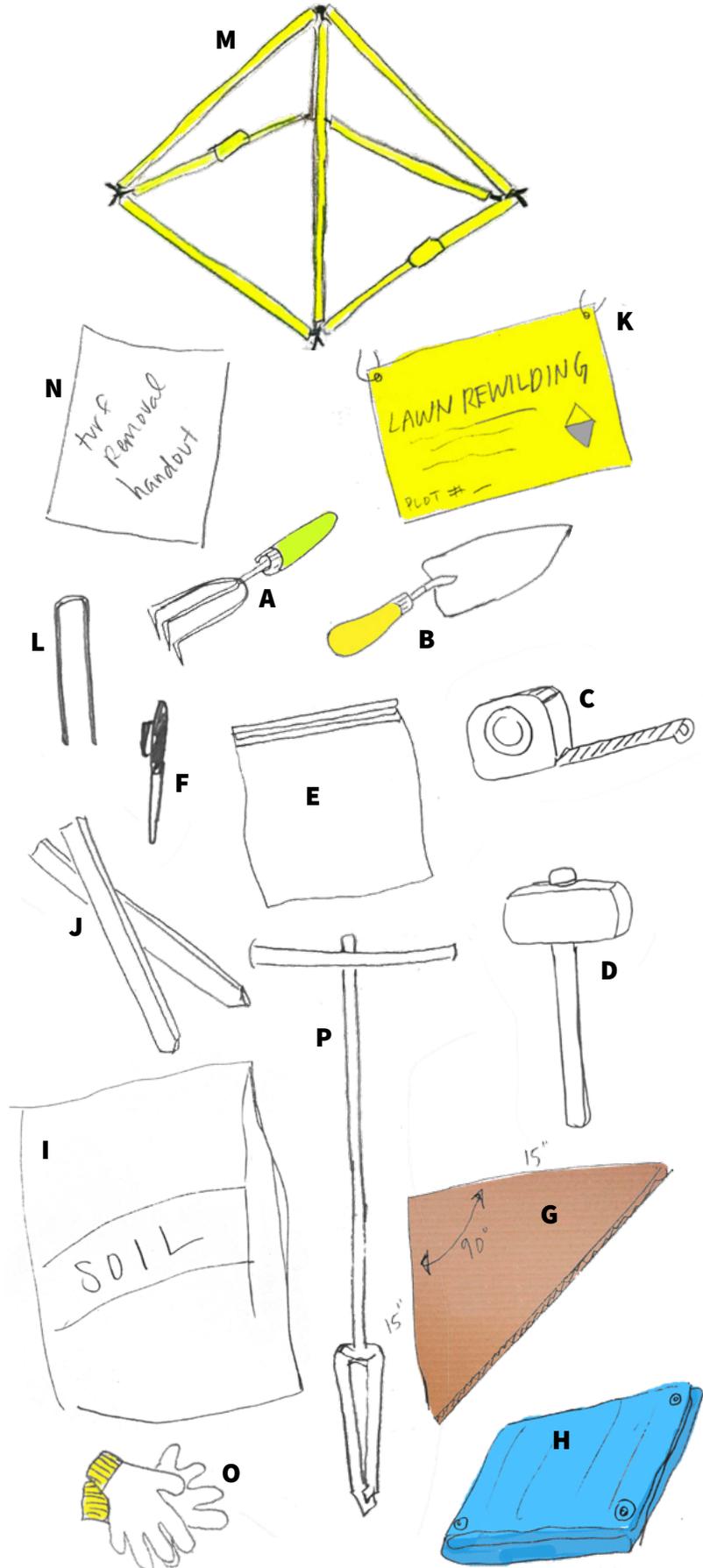
Materials/Equipment:

- A. [Hand rake/cultivator](#) (1-3, depending on group size)
- B. [Garden trowel](#) (1-3, depending on group size)
- C. Tape measure
- D. Hammer or mallet (for installing lawn corners and sign)
- E. Ziplock bag(s) or other container that holds ~4 cups
- F. Permanent marker for labeling
- G. Square corner template (a 90 degree angle cut from a large cardboard box, at least ~15 x 15")
- H. Lawn protection/turf collection surface (a sheet, tarp, or large piece of cardboard where turf can be piled as it's removed from the lawn)
- I. [Potting soil](#) (half a 32 quart bag per plot)
- J. Two wooden stakes for sign
- K. [Lawn lab sign](#) provided by NESL (comes with fasteners)
- L. 4 sod staples (same used to secure pyramid structure)
- M. Pyramid structure (see [PVC pyramid instructions](#))
- N. Lawn (Re)Disturbance [Turf Removal handout](#)
- O. Gardening gloves (everyone handling soil should protect hands from heavy metals, residual herbicides, etc)
- P. Optional: [soil auger](#) (borrow from NESL if possible)

Basic Steps:

1. Collect soil samples for indoor soil seedbank testing
2. Lay out the plot
3. Acknowledge the lawn ecosystem
4. Remove the turf
5. Place the pyramid and Lawn Lab sign
6. Clean-up and document the plot

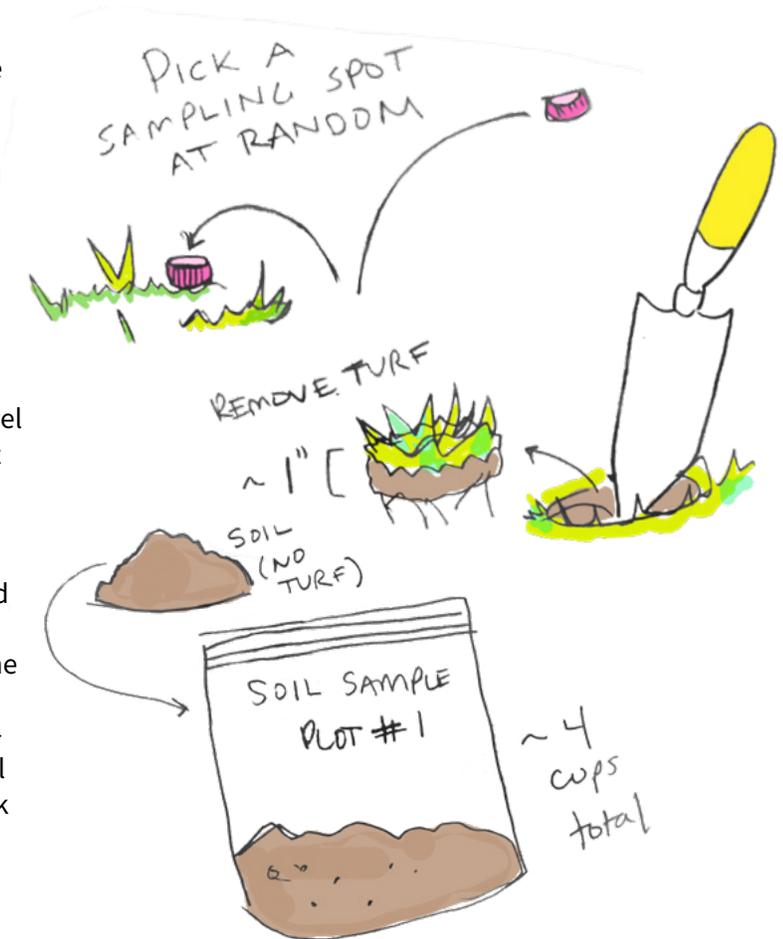
Detailed instructions for each step can be found on the following pages. Before you begin, unpack and organize your materials and equipment at the site for easy access as you work.



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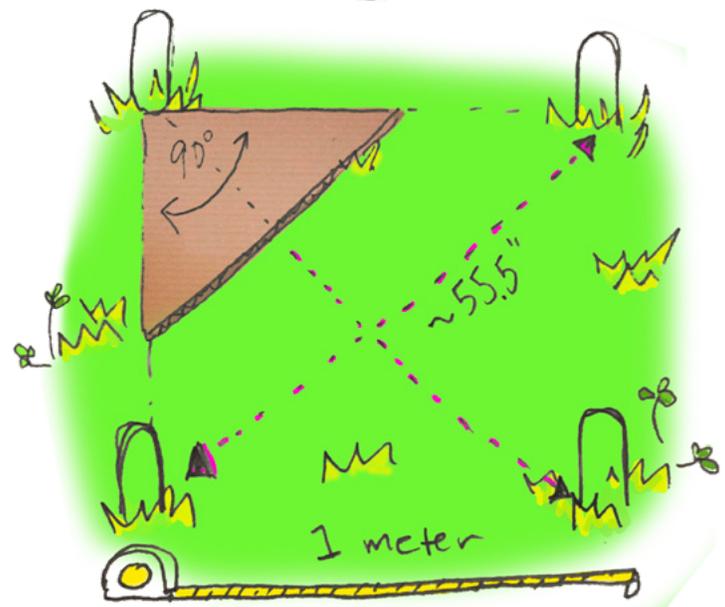
1. SOIL SAMPLING (for Indoor Soil Seedbank Test)

1. Survey the lawn and surrounding landscape for a piece of trash that is heavy enough that it won't drift on the wind (plastic bottle caps work well)
2. Stand roughly in the center of the patch of lawn for you will be establishing the Lawn Lab plot.
3. Toss the piece of trash into the air above you and let it fall to the ground. The place it lands is the location of your first soil sample. Remove a 1" deep 2" diameter piece of turf using the trowel, and place it on your turf collection surface.
4. With the turf removed, either use the soil auger or trowel to dig out ~1 cup of soil from below the lawn. Try to get soil from as deep as 8" below the surface. Return the excess soil to the hole, and replace the turf if possible. Supplement with potting soil if necessary.
5. Repeat step 2-4 three more times until you've collected ~4 cups of soil 4 different locations in the lawn. Place the soil in a ziplock or other container and label with the date and collection location.
6. Follow steps in the **Indoor Soil Seedbank Test** curriculum within 12 hours, or store the soil in the freezer until you can sprout it. See curricula on indoor soil seedbank testing for additional information.



2. PLOT LAYOUT

1. Choose one of your four soil sampling locations to be the center of your plot.
2. Use the tape measure, square template and sod staples to mark off a 1 x 1 meter (~39 x 39") square on the turf by placing one sod staple in each corner.
 - Begin by placing two sod staples 1 meter apart using the tape measure and mallet.
 - Use the 90 degree corner template and tape measure to guide your placement of sod staples in the third and fourth corners. Line the template up with the tape measure so that you get 90 degree corners.
 - *Note:* Make your square as accurate and precise as possible. Measure the square diagonally from corner to corner to double check. The length of the diagonals in each direction should be within ~1" of each other, roughly 55.5". Adjust if they are not. Otherwise your pyramid won't fit nicely on top and the area of your plot will be affected.





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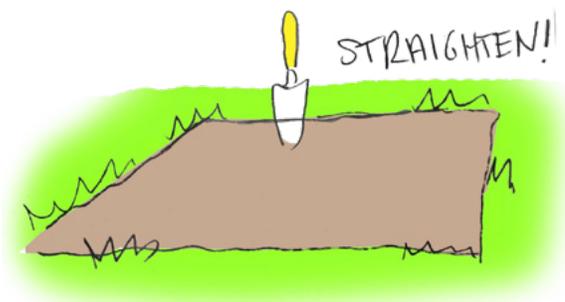
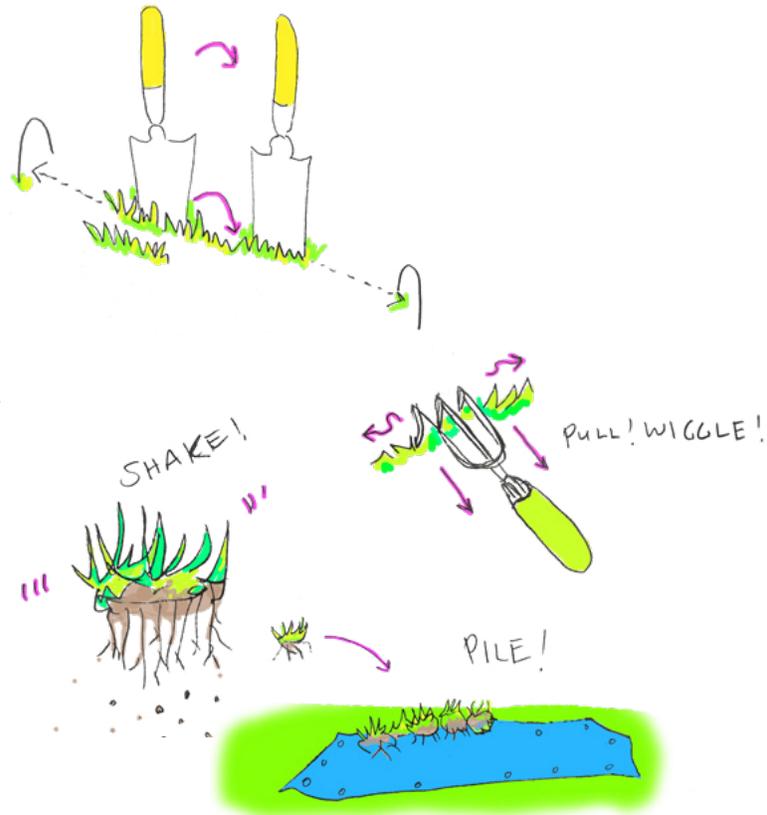
3. PREPARING FOR DISTURBANCE:

1. Review the Lawn (Re)Disturbance turf removal worksheet before beginning turf removal.
2. Document the lawn you are about to disturb with your phone (photos, video optional):
 - Photograph from above looking straight down
 - Photograph from the side in landscape orientation
3. Explore the lawn's existing ecology using the handout as a guide.
4. Read the Lawn (Re)Disturbance Acknowledgment aloud as a group.



3. TURF REMOVAL:

1. Begin by working along the edges first, using the trowel to puncture the turf until you've traced a straight line along the edges of the square.
2. Kneel in the middle of the square and push the hand rake into the turf along one of the edges. Pull inward towards your body to begin to loosen the turf. *Note:* It may take some effort to loosen the turf. Repeatedly puncturing and wiggling it with the tines of the rake can help.
3. Repeat this process across one edge, gradually pulling up the turf. *Note:* depending on the quality of the turf and soil, it may come out in small pieces, or it may come up in larger sheets.
4. As the turf comes away from the soil, try to remove all the turf/grass/roots, but as little soil as possible. As you remove pieces of turf, shake them over the plot to remove excess soil from the roots. *Note:* Keep an eye out for critters living in the soil! You may want to make a little shelter of a pile of soil to put them in, then return them to the plot when you are finished (don't leave them to cook in the sun!)
5. Place chunks of turf with soil shaken off on your turf collection surface for easy removal later. This will also help keep the lawn free of mud and debris.
6. Use the trowel and hand rake as necessary to remove the remainder of the turf. *Note:* Make the edges as neat and straight as possible. This might involve cleaning and straightening edges with the trowel towards the end of the process.

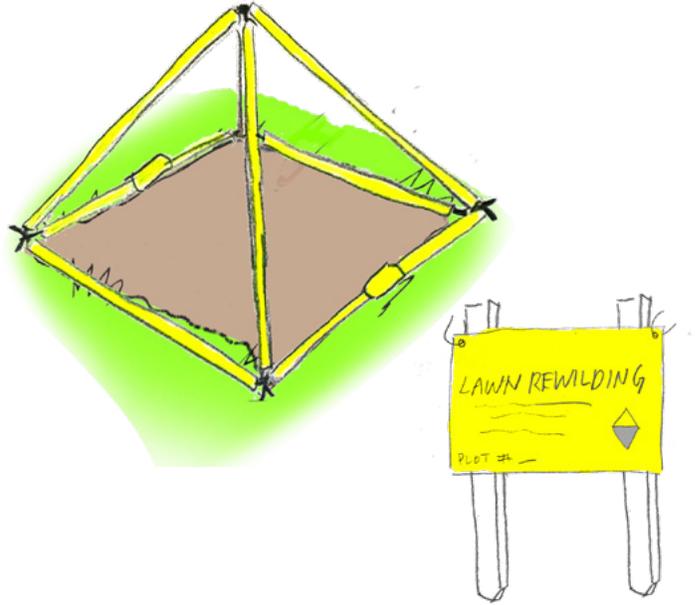




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5. PYRAMID AND SIGN PLACEMENT:

1. Remove the sod staples from the corners of the plot and use them to secure the corners of the pyramid as described in the PVC Pyramid instructions.
2. Use the wooden stakes and provided sign to label the plot. Drive the stakes at least 6" into the ground using the hammer. Secure the sign to the stakes with provided wire ties (or use a screw gun). Use the permanent marker to add a plot number to the sign if you are doing more than one plot.



6. CLEAN-UP AND DOCUMENTATION

1. Put away tools and excess materials. Compost removed turf or re-distribute in the landscape to decompose, if appropriate. *Note:* please don't throw turf away! There are lots of organisms in the soil that will suffocate if put in a trash bag, and the soil won't break down if it goes to a landfill! It is not trash!
2. Document the completed plot (photos, video optional)
 - Photograph from above looking straight down
 - Photograph from the side in landscape orientation
3. If you use social media, post some images of your new plot using the hashtags #lawnredisturbancelaboratory and #nextepochseedlibrary

Thanks for creating a Lawn Lab plot!! See following curricula in the series for information on fieldwork, monitoring, and data collection. If you have comments, questions, or suggestions about our curriculum series, feel free to get in touch:
nextepochseedlibrary (at) gmail (dot) com