Module 10: Garden Ecology

May 2021

Lesson Plan

Center for Urban Resilience

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LESSON #5: Preparing the Garden Site

OVERVIEW:
The purpose of this lesson is to physically prepare the garden site for planting.

SUB-QUESTION:
Part of preparing the garden site is to ask how many different tasks must be organized before the actual planting begins, such as:

- Acquiring the resources
- Staging the resources
- Assigning responsibilities to groups to:
  - Mark off garden sites
  - Pick up and discard any trash
  - Amend and prepare the soil
- Assigning roles and responsibilities to students once the garden is put in, setting realistic expectations

WAYS OF KNOWING URBAN ECOLOGY:

Students will...

<table>
<thead>
<tr>
<th>Understand</th>
<th>. Assign and complete the different tasks and needs required to put in a garden</th>
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</thead>
<tbody>
<tr>
<td>Talk</td>
<td>. Discuss how to coordinate each group and ask for needs</td>
</tr>
<tr>
<td>Do</td>
<td>. Manage a checklist with tasks and goals to measure progress;</td>
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<tr>
<td></td>
<td>. Implement the plan</td>
</tr>
<tr>
<td>Act</td>
<td>. Coordinate all the groups to do their part;</td>
</tr>
<tr>
<td></td>
<td>. Create a Garden Team</td>
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SAFETY GUIDELINES:

Review field guidelines when taking students outside to do any site visit.

PREPARATION:

Time:
- Outside of school:
  - 2 class periods (teacher/support persons)
- During school:
  - 3 class periods

MATERIALS:

Outside of School
These two activities may need to be completed by the teacher and support persons, such as parent/caregiver volunteers. A suggestion is to solicit donations from local garden centers and have them deliver the plants, soil, and possibly even tools. If tools cannot be donated, perhaps volunteers who are helping on planting day can bring tools the day before, so they are ready (staged) on the day of planting.

Activity 5.1 – Acquire and Stage plants
- plants for the type of garden being planted

Activity 5.2 – Acquire and organize planting materials and tools
- shovels (large)
- shovels (hand)
- rakes
- trowels
- buckets (for collecting weeds, rocks, during soil prep)
  - orange construction buckets work well for this
- trash bags (for collecting trash during the site prep)
- potting/gardening soil
- soil amendments
• gloves (adult and children sizes)
• surveyor tape
• garden stakes

MATERIALS:
During School
Activity 5.3 – Complete soil preparation, weed and prepare planting area
• No additional materials needed for this; see all tools and materials assembled in Activity 5.2
• Role cards (laminated) - so students know exactly what to do and who is doing it
• Popsicle sticks (to attach role cards to); OR
• Lanyards to insert role cards into – students can wear them instead of having to hold them
• Yarn, for lanyards

Activity 5.4 – Coordinate workers’ schedules and tasks for planting day / Assign roles and responsibilities
• Flip chart paper and markers – for drawing garden sketch and for documenting planting schedule and responsibilities assigned
• Copy paper, pencils for students to draw 2D garden sketches
• Role cards – laminated - so students know exactly what to do and who is doing it
• Popsicle sticks (to attach role cards to); OR
• Lanyards to insert role cards into – students can wear them instead of having to hold them
• Yarn, for lanyards
INSTRUCTIONAL SEQUENCE:
OUTSIDE OF SCHOOL:
*Activities 5.1 and 5.2 are for teachers/support persons.*

Activity (5.1): Acquire and Stage Plants

Step 1: Plants can be acquired in a myriad of ways. This is up to the teachers/support folks who are helping with the project. Some ideas are below:

- Have parents/caregivers and/or staff at the school donate plants (they could drop off the plants before or after school, or it could be arranged to pick them up).
- Visit local garden centers or those that are part of a national chain (such as Lowe’s or Home Depot) and see if they would be willing to donate plants for the garden. Often times they will even deliver the plants, with soil, amendments, and tools. Some garden centers will actually donate help to assist on Planting Day! Sometimes all it takes is just to ask.

Step 2: Once plants have been acquired and are ready for planting, stage plants either in the schoolyard or classroom.

*Note:* if a very sunny day, be sure to keep shade plants out of direct sunlight so they stay healthy for Planting Day!

Activity (5.2): Acquire and Organize Planting Materials & Tools

Tools, listed in the Materials Section can be acquired from many sources, including borrowing them or getting them donated from:

- Teachers
- Parents / Caregivers
- School custodial staff
- Local garden center(s)
DURING SCHOOL:
Activity (5.3): Soil Prep, Weed & Prepare Planting Area
(1 CLASS PERIOD): Preparing the planting area is the most important task. The soil must be adequately weeded and amended, in order for the plants to grow and thrive. Follow the steps below to ensure success of the school garden:

Step 1:
- Divide students into groups of 4-6, depending on how many students in the class.
- Assign a different section of the garden to each group.

Step 2:
- Distribute a set of role cards to each group.
- Review the roles and responsibilities of each role:
  - **SURVEYING** – the team assigned to this task will mark off the boundary of the garden site on all sides with surveyor tape and stakes
  - **RAKING** – this task will require raking all leaves, and removing all rocks, roots, etc. from the garden soil / area and placing everything into a bucket
  - **TRASH PICK-UP** – the team assigned to this task will use the trash bags and pick up any trash at the garden site / area
  - **SOIL PREP** – the team completing this task will loosen the soil with a shovel (large and/or hand) and amend the soil as needed (with guidance from the teacher)

Step 3:
- Distribute tools to each group.

Step 4:
- Bring students outside and have them complete their tasks.
- Circulate amongst the groups to monitor progress and assist as needed.
- Provide clear direction to the Soil Prep group, on how to amend the soil.
Activity 5.4 (1 CLASS PERIOD): Coordinate workers’ schedules and tasks for the day of planting / Assign roles and responsibilities

Step 1:
- Discuss as a class the best day for planting; keep in mind other activities that might conflict, like school field trips, assemblies, etc.

Step 2:
- Using flip chart paper at the front of the room, draw a sketch of the garden site.
- With knowledge of what plants have been donated, seek input from students on where to place the plants – keep in mind plants that may need full sun, shade, etc.
- Students should also be drawing the 2D garden site sketch, as you draw it at the front of the room.
- Have students use pencils to also place the plants after decided upon by the group.

Step 3:
- Keeping the same groups as during Activity 5.3, assign each group a specific number of plants they will plant on Planting Day.
- Assign a different section of the garden to each group.
- Document the assignments on a flip chart paper, to be easily accessed on Planting Day.

Step 4:
- Distribute a set of role cards to each group.
- This group will be responsible for completing the planting of all the plants in their section of the garden.
- 2-3 students on each team will be responsible for Materials Procurement and 2-3 will be responsible for Digging Holes and Planting; # of students on each team and for each task depends on the total number of students in the class.
• Review the roles and responsibilities of each role as follows:
  o **MATERIALS PROCUREMENT** – the students assigned to this task will gather the necessary tools needed by the Planting Team (shovels, trowels, gloves, plants)
  o **DIGGING HOLES, PLANTING** – the students assigned these tasks will dig the holes for each plant and then carefully plant each plant and cover it up to the base with the amended soil prepared by the previous day’s group

The group is now ready for Planting Day!

**Summary Notes/Conclusion:** By the end of Lesson 5, students will be able to (SWBAT):
  • Understand how to and be able to acquire and organize resources (plants, tools) for a garden project
  • Prepare a garden site for planting
  • Assign tasks for a successful project implementation
  • Work together as a team to successfully complete a project

**Lesson Standards Alignment (CA-NGSS):** See Chart in Module 10 Resources.
**Lesson Adaptations and Extensions:** See Chart in Module 10 Resources.