



Little Sprouts

ECE GARDEN TOOLKIT

Urban Harvest STL

Age Rating:

Lessons are categorized by age to make it easier for teachers to find an age-appropriate activity for their class. Most activities can be modified to work for all ages and stages of development.

Infant

12 - 18 Months

Toddler

18 Months - 3 Years

Pre-K

3 - 6 Years

Lesson difficulty:

Lesson difficulty is rated from 1-5, with 1 requiring the least amount of materials and preparation and 5 requiring multiple materials and significant preparation time from instructors



Holistic Learning:

Lessons are intended to appeal to the whole child in an immersive experience. Our goal is to target multiple dimensions of engaged learning using the outline of eyes, hands, heart, and mind. Lessons are tagged with the following symbols to identify their primary method of holistic learning.

Eyes



Emphasizing the importance of observation in outdoor education

Hands



Emphasis on learning by doing, hands-on practice and engagement

Heart



Engaging emotions and self-reflection. Social-emotional development .

Mind



Learning from books, listening, using intellect

Note: This model was developed using the Children in Permaculture Manual as well as Missouri Early Learning Standards (MELS)




Little Sprouts Garden Rules

1. Always walk in the garden and stay on walking paths
2. Ask an adult before using any tool or picking any plants
3. Dirt stays down!
4. Respect plants, animals, and each other

Garden Sensory Bin

Audience: Infant, Toddler, Pre-K

Difficulty:   

Holistic Learning: 

Materials:

- Plastic bins
- Potting soil
- Small children's trowels
- Rocks
- Artificial or real flowers
- Pots

Objectives:

- To provide an opportunity for students to engage their senses and practice fine motor skills.
- To introduce young students to garden materials, practices, and rules in a safe, controlled environment.

Description:

1. Fill multiple plastic tubs with potting soil and collect garden materials such as rocks, flowers (real or artificial), small flower pots, small shovels, etc.
2. Once you've assembled your bins they can be used for multiple different activities. Some ideas include:
 - a. Scooping the soil from the bucket into a pot and "Planting" an artificial flower
 - b. "Planting" artificial flowers/veggies in the bucket to make a mini garden. Could also practice "harvesting" artificial plants from the bin
 - c. Hiding rocks or seeds in the soil and students search to find them

Bug Hunt

Audience: Toddler, Pre-K

Difficulty:     

Holistic Learning:  

Materials:

- Magnifying glasses
- Bug boxes

Objectives:

- Engage students' senses and observational skills
- Learn about different habitats bugs may live in
- Reinforce the importance of gentle and respectful handling of insects

Description:

1. Bring students into the garden space to participate in a “bug hunt”
2. Divide students into small groups or “teams” and provide each team with a bug box, and each student with a magnifying glass
3. Encourage students to think of different habitats bugs may live in, like flowers, leaves, soil, under natural vegetation, etc.
4. Reinforce the importance of gentle touch when handling any bugs they find
5. Come together at the end and discuss what bugs students were able to find and where they were living

Soil Shake

Audience: Toddler, Pre-K

Difficulty:    

Holistic Learning:  

Materials:

- Clear jars
- Soil from various areas in the garden

Objectives:

- For students to have experience conducting experiments and making observations
- To introduce concepts such as density and soil composition

Description:

- Decide if you would like to split the class into small groups to collect soil, or work together as the teacher collects soil to add to a jar.
- Fill the jar about $\frac{1}{3}$ of the way with your soil sample, and $\frac{2}{3}$ with water, leaving space at the top.
- Have students take turns shaking the jar until the soil particles have loosened and are floating in the water
- Wait a few hours, or overnight, for the soil to settle and then observe with the class
- The soil should settle into layers based on density. Gravel at the bottom, then sand, then silt, then clay. There may also be organic material floating on top of the water.
- Ask students what they observe in the jar. You could also have them draw the jar with each of the different layers.

Garden Game: Pass the “Bug-bag”

Audience: Toddler, Pre-K

Difficulty:    

Holistic Learning:   

Materials:

- Speaker for music
- 1-3 bean bags, painted as bugs

Objectives:

- Engage students’ motor skills and listening
- Promote cooperative play and collaboration in the garden
- Recognition of beneficial insect species in the garden


Description:

1. Bring students into the garden and stand or sit in a large circle together facing the center
2. While music plays students pass the beanbag around the circle, when the music stops the child holding the bag should call out the name of the bug on the beanbag they’re holding and can do a special dance or pose inspired by that bug
3. “Pass the Beanbag” video by Noodle & Pals on Youtube includes lyrics to make instructions easy and has different tempos to challenge students
4. Add more beanbags for a bigger challenge, each student left holding a bug can do the bug dance or pose when the music stops

Sunflower Sensory Lesson

Audience: Toddler, Pre-K

Difficulty:  

Holistic Learning: 

Materials:

- Sunflowers from the garden
- Tweezers
- paper plates
- Crayons/markers

Objectives:

- To reinforce students' knowledge of plant life cycles
- To practice fine motor skills by using tweezers to dissect the seeds from middle of the sunflower

Description:

Before beginning this lesson, you can practice acting out the life cycle of a sunflower with students:

(1) Seed = sit with arms and legs tucked into a ball (2) Plant = Stand and reach arms up to mimic leaves (3) Flower = arms above head and fingers spread out (4) Seed on flower = drop arms to your side to mimic seeds falling back to the ground

Activity:

- Collect sunflower heads from the garden once they've matured and are ready to go to seed (usually September/October)
- Give each student a paper plate and write their names on the back
- Have students work together to "dissect" the sunflower using tweezers to pull the seeds out from the center of the plant
- Students will glue their seeds onto the center of the plate and then use markers or paint to draw the petals around the seeds

Butterfly Sensory Bin

Audience: Toddler, Pre-K

Difficulty: 

Holistic Learning: 

Materials:

- Bow tie pasta
- Rotini pasta
- Shell Pasta
- Food coloring

Objectives:

- Learn about the butterfly life cycle
- Sort pasta by color, shape, stage of the life cycle
- Reinforce math concepts such as counting, sorting, understanding patterns, etc

Description:

1. Each pasta shape represents a different stage of the life cycle
 - a. Bow tie = Butterfly
 - b. Rotini = Caterpillar
 - c. Shell = Chrysalis
2. Use food coloring to dye the dried pasta noodles different colors and mix them together in an empty bin
3. Students can then explore the sensory bin and sort the pasta based on color or shape
4. Discuss what stage of the lifecycle is represented by each shape
5. Expand on this lesson by going to the garden to look for butterflies or with a book/video about the butterfly lifecycle

Biodiversity Detectives

Audience: Pre-K

Difficulty: 

Holistic Learning: 

Materials:

- Paper
- Pencils/something to write with
- Magnifying glasses

Objectives:

- Understand that diversity in the garden is what helps it to flourish.
- The more diversity there is, the better our garden will grow.
- To understand what makes something a “living” organism

Description:

Biodiversity refers to the diversity of living organisms in our ecosystem. Tell students that today they will be biodiversity “detectives” as you hunt for living organisms in the garden. Students can count how many they find and record it with tally marks on their papers depending on age.

Some characteristics of living things are that they: grow and develop, reproduce, breathe, need food and water to survive, and adapt or respond to their environment.

Ask students to look for these characteristics of different things in the garden. They can start by looking up for tall plants or anything that flies, then they can look down for anything living right on top of the ground. Lastly, they can use a small shovel to look for organisms living under the ground such as worms and other insects.

Color Hunt

Audience: Pre-K

Difficulty: 

Holistic Learning: 

Materials:

- Paint swatches

Related Books:

- Planting a Rainbow by Louis Ehlert
- Eat your Colors

Objectives:

- To engage students' sense of sight and observational skills
- To provide an easy to manage activity for teachers to use with preschoolers in the garden
- To reinforce students' knowledge and ability to identify different colors

Description:

- Have students work individual or in small groups or pairs and give each student/group a key ring with various colors of paint swatches.
- Begin class with a book and ask guiding questions: What colors have you noticed when we are in the garden? Why are plants so colorful? Do colors help attract birds and other wildlife to the garden?
- In the garden, students will explore with their swatches and find garden materials that match each color
- When finished, come together as a group to discuss students' findings. Were there any colors they couldn't find? What colors are there the most of?

Upcycled Bird Feeders

Audience: Pre-K

Difficulty: 

Holistic Learning: 

Materials:

- Old toilet paper/paper towel tubes
- Crisco vegetable shortening
- Craft sticks
- Bird seed
- Yarn/string

Objectives:

- Understand that birds are important garden visitors
- Think about how their habitats might change in the fall and winter

Description:

1. Each student will get a toilet paper roll and use a craft stick/popcycle stick to spread vegetable shortening on the roll. The shortening helps to keep the roll waterproof and allows the bird seed to stick
2. Pour the bird seed into a shallow tub and have students cover their paper roll in bird seed.
3. Assist them in attaching yarn to their bird feeder through the middle and tying a loop
4. Go into the garden and have students hang their bird feeders anywhere they would like.
5. Observe over the next few days as the birds enjoy their snack!

Eat with a Beak

Audience: Pre-K

Difficulty:    

Holistic Learning:   

Materials:

- cups
- Beaks
- Clothes Pins
 - Spoons
- Food
- Pipe cleaners
 - Beans
 - Macaroni Pasta
 - Tiny seeds

Objectives:

- Learn about different types of bird beaks and how it affects their diet
- Attempt to pick up different “food” with different “beaks”
- Engage student’s observational skills on which beaks are better suited for which food

Description:

1. Each student has a cup and a spoon or clothespin to use as their “beak”
2. Place one type of “food” in the center of the table.
3. Students will try to pick up as much food as they can in one minute, then return back to their seats.
4. Repeat step 3 for all “food” options
5. Discuss what types of beaks are better at eating certain types of food and how that affects the bird’s diet by feeding on only the food they can easily access. What would happen if the only food available can’t be easily eaten using their beak?
6. Expand on this lesson by looking in the garden for plants that each type of beak could eat from.

Sun Printing

Audience: Pre-K

Difficulty: 

Holistic Learning:  

Materials:

- Construction paper
- Clear plastic wrap or plexiglass
- Plant materials like flowers, leaves, and stems

Objectives:

- For students to become familiar with the various items growing in the garden
- To create a fun art project using garden materials

Description:

- Bring students into the garden and ask them to collect 3-4 different plant materials. They could collect sticks, leaves, flowers/flower petals, stems, or any other items they find in the garden
- Give each student one piece of colored construction paper and have them lay out their items on the paper however they would like
- Lay the papers outside or in a sunny window and cover them with clear plastic wrap or a clear piece of plexiglass. Weigh down the edges with rocks or bricks so that nothing moves or blows away.
- Leave the project in the sun for 2-3 hours before removing the plastic wrap and plant material. Students can then observe their sun-printed designs.
- **You could also use this lesson to demonstrate how strong the sun can be and emphasize the importance of sunscreen!**

Resources for Teachers

Books

Toddler Board Books (12 mos-3 yrs)

Thank You Farm
In my Garden (Nat Geo)
Bloom
Hello World! Garden Time
Plant the Tiny Seed
Hello Garden
Eat your Colors

Pre-School Books (3-6 Yrs)

Lola Plants a Garden
Planting a Rainbow
Eating the Alphabet
Up in the Garden, Down in
the Dirt
In a Garden
From Seed to Plant
Bea's Bees

Music and Videos

Check out Urban Harvest STL YouTube channel for our special Little Sprouts playlist:

[SINGING SPROUTS: TUNES FOR TINY GARDENERS](#)

Other YouTube channels for kids in the garden:

[Science in the Garden!](#) by SciShow Kids

[Gardening for Kids & Kid Friendly Videos!](#) by Lawrence Farm



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