

Firefly Scientists' Garden

Environmental Education at The Lemberg Children's Center



DECEMBER IN THE GARDEN

December is here! Temperatures have finally dropped into the 30s, and we have to bundle up every time we step outside. Hooray for scarves, gloves, and mittens! Even though many of our lessons started inside, we still got out into the garden. The cold never bothered us anyway... Winter officially began on December 21st, and we always love to play in some snow.

LEARNING THIS MONTH

Worm Anatomy

Our Navigator, Voyager, and Pathfinder friends took a closer look at our very own Lemberg worm bin. We read *Wonderful Worms*, listening to the importance of worms in the garden and how worms are different from humans.



Reading about worms with Micah!

Worms have no eyes or noses, but they have mouths! Worms feel with their entire body, so we have to be gentle with them. Worms' bodies are split up into segments, and they have a thick band called an egg ring or clitellum. We placed worms in Petri dishes to take a closer peek at their anatomy. Using magnifying glasses, we

found their heads, tails, egg rings, and segments.



Look at it wiggling!

In the garden, we collected the remaining Swiss Chard to feed to the worms. It's great to compost with the worms as they make amazing fertilizer from their poop!



One final harvest

As we fed them, we discussed how they help us in the garden and came up with hypotheses about their bodies. We compared what we saw to posters to point out where different parts of their bodies are located.

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A beautiful string of bird feeders and flowers

Making Pinecone Bird Feeders

Our Navigator, Voyager, and Pathfinder friends took to the garden to learn more about birds and what they do during the winter. We read *Have you Seen Birds?* and discussed the many colors, shapes, and sizes that birds come in.



What kind of birds will we read about today?

Then, every kid got a plate with a pinecone. We rolled the cone in Sunbutter and sprinkled birdseed on top. We chatted about how birds

need a lot of food in the winter because there are fewer food sources around. The bugs are harder to find, and there are less berries around.



We tried to cover all the nooks and crannies!

We wrapped string around the top of the cones and hung the cones on the marigold garlands. Not only do the birdfeeders provide some lovely decoration to the garden, they help provide some wintery sustenance to our local bird communities!

Toddlers In The Garden

The toddlers have had so much fun playing in the garden this month. When the paths were being repaved, we were able to watch the construction equipment drive through the garden, which was so exciting!

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A Year In the Garden: Looking Back at 2022

Over the past year, the garden set the stage for an assortment of enriching activities for the children.

Winter

During the winter, children painted snow while asking questions about where snow comes from and how snowflakes are made and observing the snow melting as they created colorful designs in the snow. Investigating mushrooms, and learning about the 3 R's (Reduce, Reuse, and Recycle), and don't forget the garden's favorite approach to waste disposal: Compost!



Painting snow

Spring

As spring approached, the children explored seeds, learning about the tiny plant contained in each one. They planted seeds which became sprouts, giving them the opportunity to examine the parts of a plant, and they looked for the signs of spring, learning about seasons in the process.



Planting peas and looking for worms!

Once the ground thaws, the busy season in the garden begins. Both people and plants work hard to transform the empty beds into a lush foodscape. The children helped get this started by planting peas in the raised beds in the playground.

The warming weather in March allowed us to hold our first family garden work day of the year when parents helped to install a new raised bed in the swingset area.

Our collaboration with Stanley Elementary got rolling in April with weekly afternoons in the Stanley garden, and two workdays with Symbiosis, a Brandeis student group that helped us create a mulch path, clean up trash, and more.

April and May brought baby bunnies, migratory birds, and daffodils. The children spent time drawing flowers, and helping the interns plant many seeds that would get a headstart by growing in the warmth of the greenhouse.

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"I'm a plant, too!"

They contemplated what makes something a plant, searched for bugs, and planted tomatoes and peppers—warm season crops that can only be planted after all danger of frost has passed. Warm weather also meant the plants needed water. The toddlers were terrific watering helpers.

Summer

In June, we shared our space with a family of morning doves nesting in our gazebo. Planting potatoes gave the children an opportunity to review the parts of a plant, and a sunflower planting activity provided the backdrop for a discussion of pollination. All of the rapidly growing plants need nourishment, so June was a great time to make fertilizer from worm castings (yup, that's the fancy word for worm poop), and have lots of fun exploring the worm bin and feeding the worms.

The best-smelling activity of the year may have been our exploration of mint, which allowed us to examine the differences between plants that aid in identification: from the appearance and

texture of leaves, to the size of roots, and the smell of crushed leaves.



Caring for our growing garden

In the meantime, there was plenty of planting going on in the Stanley learning garden, where they also added a new raised bed and began construction on a new shed.

By the end of June it was clear that we were in for a drought. Droughts are always bad news for gardens and gardeners, as hot dry weather can lead to plant stress and crop failure. At Lemberg, we have an automatic watering system installed a few years ago thanks to a grant from the Brandeis sustainability fund. Our irrigation system automates the watering process and uses drip irrigation for most of our beds—this is the most efficient way to keep our plants healthy without wasting water. Thanks to irrigation, by July we were able to begin harvesting many of the veggies we had planted earlier in the growing season.

In July, the children continued the plant identification lessons, using all of their senses to

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observe similarities and differences between peppermint, spearmint, lemon balm, and wood sorrel.

Our second year of our summer Youth Development Program, the Lemberg Environmental Action Force (LEAF) began in July. LEAF interns are high school students with an interest in children, gardening, and/or the environment. They joined us three days a week for 6 weeks, helping with a wide variety of projects, from making seed balls and picking carrots with the children, to pulling invasive weeds along the Charles River and helping us install irrigation in the Stanley Elementary learning garden.



Assembling our seed balls together

The sultry days of late summer brought us abundant vegetable harvests both at Lemberg and in the Stanley garden. It's the season of tomatoes and peppers, beans and zucchini.



Celebrating our harvest

Fall

As summer shifts to autumn, we begin to feel and smell the change in the air. The harvest which was abundant in September, continues into October, but shifts from warm season crops like tomatoes, pepper, and cucumbers to cooler season crops such as kale and winter squash.

During the mild days of autumn, the children explored seeds and seed pods, noticed the changing trees, and observed the many colors, shapes, and textures of fallen leaves.



Observing seed pods through a magnifying lens!

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It was the perfect time to create leaf rubbings, explore logs, and discover worms and bugs. Over the weeks, the air grew crisp and eventually it was time to put the garden to bed for the winter. This too is a fun opportunity for discovery and exploration—discovering the last vegetables to harvest, learning about the value of soil and how we keep it healthy over the winter, and so much more.



We worked together to roll over big logs.

Back to Winter

Winter returned in December, with barren trees and temperatures dipping below freezing night after night. The garden rests, while the children put on more layers and heavier coats and continue their outdoor explorations. There is still plenty to discover in the garden, from ice crystals, to frozen footprints, to dried flower stalks in our pollinator garden.

Looking Ahead

And now we begin the new year with many questions about what lies ahead.

As gardeners we wonder, will it be a winter of heavy snowfall and cold temperatures? Or will

we have another dry spring and summer—further depleting the groundwater reserves that we made use of during last summer's dry spell? Will the wildlife nibble our seedlings or allow them to grow, quickly filling our garden beds with their leafy abundance?

But despite those worries and uncertainties, life in the garden brings us a greater appreciation for the rhythm and repetition of New England's seasonal cycle. As Beth's 7-year-old Lemberg alumnus recently observed, sometimes we can predict some of the future. Just as we know that there is no school on Saturday, we know the sun will rise earlier each morning and set later each evening as January progresses, and the seasons repeat their annual dance.

We know that as the weather warms, plants will grow, migratory birds will return, and the bunnies will find someplace to nest in our garden, while we plan another year of lessons to provide small humans brimming with curiosity a chance to explore, touch, smell, feel, and learn.



We found some leaves!

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Thank you so much to Sylvia, Beth, and our environmental interns, Sarah, Caroline, Christie, Alia, and Micah, who prepared and led a multitude of enriching experiences for the children, and kept the garden going through all kinds of weather, keeping up with mundane maintenance while also providing creative and thoughtful educational programming.

## Family Garden Days

We are grateful for the extra hands and the chance to enjoy a morning in the garden together. Now that the garden is all tucked in, it can rest for the winter. When it starts to warm in the spring, we will come back together to wake up the garden! Please reach out to Sylvia if you have any questions at [skohnlevitt@lemborgcc.org](mailto:skohnlevitt@lemborgcc.org)

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