

GARDEN NEWS

Fall 2015



It's been a wonderful fall season in the garden this year, with more students doing more lessons and projects than ever before!

The garden weathered well an early hard frost in October, which killed off many of the tender plants while leaving hardier varieties to enjoy the warmer temperatures that followed. The fall bounty was also cut short by a visit from Central Hudson to deliver the **school's new transformer**, a necessary upgrade to accommodate Haldane's new solar panels. The PTA Garden Committee scrambled to cut back, dig out and save plants slated to be crushed by the heavy truck, since sole access to the transformer's location is effectively *through* the garden. To

ABOVE: Garden Parent Sandy McKelvey has their attention! As part of their fall plant unit, 3rd grade classes all visited the garden this fall to dissect and investigate male and female reproductive parts. Mr. Harrington even joined in for a lesson!

everyone's relief, the truck managed to narrowly fit just in between the beds and destroyed nothing, creating peace of mind should future repairs prove necessary.

Based on teacher input, this school year Haldane's Board of Education approved **contract garden educators** to lead grade level lessons in the garden. Carolyn Llewellyn, Sandy McKelvey, and Kory Riesterer are available to teachers to help develop garden lessons that connect to their curriculums. The garden educators also reach out to classroom garden parents for additional help, ensuring every child in a grade gets the same garden experience and no one class misses out, because despite their dedication, not every garden parent has the same amount of time or expertise to realistically devote to garden lessons each year. This fall every class K-5 enjoyed at least one curriculum-aligned lesson in the garden, with some grades going out two or three times with garden educators. This kind of authentic, hands-on learning deepens understanding, improves health and wellness, and activates the imagination long after the lesson is over! Moving forward, the PTA Garden Committee is hopeful Haldane can build an equitable and sustainable school garden program that continues to utilize parent and community volunteers while incorporating the garden more fully into the structure of the school.

RIGHT: Mrs. Scrocca's 3rd graders enjoying a hands-on lesson on bee behavior and how pollination works.



Jade Silverstein, former Glynwood intern and Haldane graduate, is currently in her second year at Hampshire College in Amherst, MA, focusing on how agriculture and botany affect learning and learning environments. As part of her research, she's been observing some of the lessons happening in the school garden this fall. We're thrilled the Haldane Garden is being used as an educational model for further study, so thank you, Jade, for reaching out to your old alma mater!



Fall Garden Highlights

Kindergarten: Each fall Kindergartners are introduced to the school garden for the very first time and learn to use their five senses to explore all the garden has to offer. This year they also had a garden lesson to support their pizza PBL unit. Students sampled herbs and vegetables used for making pizza sauce and pizza toppings, and they learned how to grind grain into flour for baking pizza crust. The students even made cheese outside in the garden!

First: First-graders continue to use their five senses as scientists, sorting and classifying objects in the natural world. They explored a range of diverse seeds in the garden, collecting some to take home. They gathered data using their senses of smell and taste, sampling edibles throughout the garden and smelling many different plants in the sensory bed. As the leaves began to fall, they looked at different shapes and types of leaves, learning about evergreens and deciduous trees. Students even made their own Leaf Creatures in the garden, based on Lois Ehlert's book *Leaf Man*, to be blown away by the autumn wind...



Second: Math is a big part of second grade, and students went outside to make observations about plants and take measurements: bed dimensions, garden gates, tallest plants and vines, etc. They compared various heights and subtracted the difference. Mr. Peparo's class also calculated how many peas would fit in a row and how far to space them, adding total rows of peas in one raised bed. Another fall lesson was all about bulbs: students learned that a bulb is a refrigerator for the plant, storing all the food and energy it needs to make it through winter, then students planted both garlic and tulip bulbs. It was fun talking about garlic right before Halloween and learning many European folk beliefs consider garlic powerful protection against demons, werewolves and vampires. To ward off vampires, garlic was worn, hung in windows, or rubbed on chimneys and keyholes. Students planted enough garlic in the garden to protect Haldane from all sorts of scary monsters! And garlic is so important for good health, when they harvest and cook it next year, it will protect them from colds and infections too.

Third: Third grade's fall science unit is all about plants and the garden is the best place for students to learn hands-on, as junior botanists! Like last year, students dissected reproductive flower parts and saw examples of simple and composite flowers, perfect and imperfect flowers. Then they each got to taste edible nasturtium flowers! Mrs. Scrocca's class found examples of the many different methods of seed dispersal in the garden, and they practiced "being bees" in a fun pollination game.



Fourth: Fourth grade kicked off their Native American unit with a lesson all about the Three Sisters: corn, beans, and squash. They listened to the legend while snacking on cornbread, then pounded dried corn into cornmeal. Students also toured the garden to discover plants Native Americans used for medicinal, culinary, and ceremonial purposes. They even got to taste sunchoke tubers! Mrs. Hartford's class also visited the garden several times this fall to learn more about composting.



Fifth: The Universal Declaration of Human Rights came to life for fifth graders in the garden! Not only did students learn what it means to be a migrant farm worker and the back breaking labor involved, they were put to work in the garden and assigned random roles to play: the top 1%, a few middle managers, and the rest workers. Students were treated appropriately, and everyone experienced firsthand how unfair the world can be. Later in their classrooms, they drew upon their experience to talk about the importance of human rights and labor laws. In addition, fifth graders also did a fun garden scavenger hunt with class garden parents.



Sixth: Mr. Wick's eco-students have also spent time in the garden this fall. They learned about the importance of preserving plant genetic diversity by saving seeds, specifically how to save tomato seeds by breaking tomato seed chemical dormancy. They also had a lesson on energy: photosynthesis, solar panels, and human muscle energy: the sixth graders have done a lot of heavy lifting in the garden!

Budding 6th grade artists were spotted in the garden this fall to practice the art of botanical drawing, all thanks to **Haldane Art Teacher Jean Cendali**. Long before cameras, botanists and plant explorers on the hunt for exotic new species traveled the globe with sketchbooks in hand - the art of botanical drawing goes back centuries and shows us how science and art are historically interrelated. Thank you Mrs. Cendali for introducing Haldane students to botanical drawing!



Authentic Learning in the Garden...

Haldane's strategic plan may be new, but the goal to infuse more authentic learning into the school day has been going on in the school garden since day one! Here are three examples of projects from this fall:

1. Extending Growing Seasons: Mrs. Grom's 5th graders and Mr. Wick's 6th grade eco students teamed up for an authentic learning project on how to extend growing seasons. Mrs. Grom's students did all the math needed to calculate spacing of PVC pipe, length to cut pieces, and just how much row cover fabric (area) was needed to cover two of the garden's raised beds. Once 5th graders figured out the math, the project was handed over to 6th grade students to actually construct the mini hoop houses. Sixth graders learned about different techniques and materials farmers and gardeners use for growing plants deeper into winter and earlier in spring, and why this is beneficial. Then they rolled up their sleeves and got it built! Next time you tour the garden, you'll see two covered raised beds, keeping plants and seedlings snug inside, so classes can monitor growth all winter long.



2. Maple Syrup: Mrs. Scrocca's 3rd graders started a project on Maple Sugaring this fall. The class visited the Haldane Nature Trail and looked for clues to identify and tag Sugar Maples in the forest. They compared the bark and leaves of the different trees to determine which ones were indeed Maples. They also compared the leaves of Sugar Maples and Norway Maples (which are very similar). Using hammers and nails, they tagged 8 Sugar Maples to be tapped in March.



3. Composting: Mrs. Hartford's 4th graders have taken on the garden's compost system as an authentic learning project this year. Students worked in pairs and developed a list of "what we know" and "what we need to know" in order to answer the driving question: "How can we utilize our garden compost to make it more manageable?" Each pair assessed the existing bins, which have not been working ideally, and researched what compost is and the best structure to hold our school's compost. In the garden, students learned about composting systems and Haldane's specific needs from **Haldane Garden Educator Carolyn Llewellyn**. Each group took measurements of available space and designed a compost bin that would help make the space more manageable. In the classroom they did extensive research to inform an improved design. They are now writing to local businesses to ask for donations and working with **Haldane garden parent Jeff Silverstein** to plan construction of a new structure as soon as possible.



Middle School Service Learning

This fall the garden partnered with **The Cold Spring Village Tree Advisory Board (CSTAB)** for the first annual MS Service Learning Day. On November 13, two teams of 7th graders grabbed tools and buckets from the garden's Ed Shed to head down Main Street. For nearly two hours the students weeded street tree pits, a task long overdue in the village! Both the PTA Garden Committee and CSTAB thank these students for their hard work and spirit of volunteerism, performing valuable work on behalf of public trees. CSTAB hopes to partner with more Haldane students and the PTA Garden Committee, planning future tree plantings and village beautification projects.

RIGHT: 7th graders use garden equipment to weed tree pits and pick up trash on Main Street as part of the MS Service Day.



Farm to School Update

The Second Annual **Family Pasta Dinner** on October 29th was a huge success! With over 200 attendees, we raised \$1200 for Haldane's Farm to School program. Glynwood donated a hundred pounds of tomatoes for the sauce and spinach, carrots and beets for the salad. The garlic and basil, and more tomatoes, came from Haldane's own garden. Fishkill Farms donated the apples for the delicious baked dessert and Nature's Pantry donated maple syrup and other ingredients. Beacon Bakery donated the baguettes and the PTA covered the cost of the paper supplies, while Foodtown donated Gluten Free pasta, butter, vinegar, and other last minute necessities.



Thanks to food service manager, Nancy, and head cook, Danielle, we had two delicious pasta dishes with marinara sauce and spinach pesto. Huge thanks to all the parent and student volunteers working behind the scenes, to all the Haldane staff and administration that stayed late and volunteered their time... It was a great evening for all!

In the classrooms, grades K-6 each continue to take turns enjoying their own Farm to School month, with a visit from both Haldane's **Farmer in the Classroom**, and **Chef Evelyn Garcia from the Culinary Institute of America**. This fall the first graders learned all about tomatoes and made bruschetta complete with fresh ricotta they made themselves. The fourth grade corn lessons enhanced their Native American Three Sisters theme this fall, and third graders begged for more and more broccoli, enjoying warm broccoli soup on a cold November morning.

LOOKING ahead...

- Come January we hope to repeat last year's **Winter Amaryllis Race**, this time using last year's bulbs to race against this year's new bulbs!
- This winter we also hope to improve access to the **MS Greenhouse** across more grades, partnering 6th and 1st graders for sowing microgreens and for 6th graders to work on mini hydroponic systems.
- **Teachers:** we continue to value your input. Let us know how you think lessons went, how to improve them, or what new lessons and projects you'd like to try next fall. The garden relies on your expertise as much as it relies on its parent volunteers to keep Growing Haldane!



BIG THANKS to...

- The continuing support and original garden start-up grants from **HSF** and **HHLT**.
- This year's **garden parents** for volunteering their time and expertise to help facilitate fall lessons.
- **Dar Williams** for donating nasturtium blossoms from her home garden for 3rd graders to sample!
- **Sandy McKelvey** for leftover PVC pipe for row cover project.
- **Glynwood** for donating garlic bulbs for the 2nd graders!
- **Joe Curto** for his generous online contribution. Yes, the garden website has a **PayPal button**!
- **Haldane's BOE** for approving contract garden educators this school year. Thank you for recognizing the immense value in outdoor, experiential education for Haldane students!
- **Philipstown Tree Service** for wood chip mulch. **Jerry Allen** has been donating mulch for years to the garden – thank you Jerry for your continued support!
- **Casey Grossman** for Sunchoke aka Jerusalem Artichoke tubers from her own garden for 4th graders to sample. This is the second year Casey has dug out tubers for Haldane students – many thanks!
- **Glynwood, Fishkill Farms, Nature's Pantry, Beacon Bakery, Foodtown, Haldane PTA**, and the many, many volunteers who helped make the spaghetti dinner a huge success!



The Haldane Garden Committee is: Beth Sigler, Melissa Angier, Carina Frantz, Kathy Gordineer, Jennifer Zwarich, Alex Dubroff, Fiona Fortuna, Kory Riesterer, Carolyn Llewellyn, Sandy McKelvey, Shawna Chandler, Bettina Utz.

info@growinghaldane.com www.growinghaldane.com facebook/growinghaldane

grow your mind
HALDANE SCHOOL GARDEN