

Classroom Newsletter

CAREN & STEVE

Adolescent | 2014-15



It's been a glorious spring on the farm, with many sunny days, seedlings poking through the warm garden soil, honey bees raiding the dandelions for nectar and pollen, and young kids – goats, that is - leaping in the pasture. The students have been just as busy as the plants and animals around them. They must not only work the farm and gardens but also keep up with a demanding academic workload. They are learning to play a role in their community that makes them feel useful, capable and knowledgeable. Their life at school, which is varied and experience-rich, exposes them to much more than traditional classroom fare. Maria Montessori wrote that for the adolescent,

"Education should include the two forms of work, manual and intellectual, for the same person, and thus make it understood by practical experi-



ence that these two kinds complete each other and are equally essential to a civilized existence."

Below are newsletter contributions from the students, and from them you will get a sense of how manual and intellectual pursuits flourish symbiotically in the farm environment. It will be clear, too, that the students are engaged and joyful, as they go about the natural business of constructing their young, educated adult selves.

-Caren

A Three-Sisters Garden

By Kati Kruzcek



turn over the soil and add compost. The soil was tested for potassium and phosphorus and other elements from the Periodic Table. Potassium, phosphorus and nitrogen are the three key nutrients in the soil for the growth of a plant. Our soil has about the right amount for healthy



growth. Some plants were started from seed in the garden and others were started in pots indoors and transplanted to the garden. This year seems to be a great year for planting and about 85% of our seeds have germinated. We have planted vegetables such as zucchini, carrots, lettuce, beets and scallions as well as herbs including basil and dill.



Weathering our Goat By Emma Stremper



Weathering, or castrating, a goat is an important part of the farm school experience. In the months March and April, five goats were born at Millstream Farm: Luna, Monte, Leo, Lucky, and Ellie. Two of these were bucks, Monte and Leo. We castrated both. Before we made any drastic decisions, we did research on the task. There are three popular methods for weathering goats: surgically, the burdizzo method, or banding. We chose to band, or elastrate, Monty first because he was the first born. We watched videos on how to do it properly and practiced on non-living objects. The materials needed include an elastrator (a metal instrument to stretch the rubber band), and a special rubber band made for castrating.

It was a nerve racking experience, because if the procedure went wrong the goat would be in a lot of pain. The real thing went as swiftly and as successfully as it could possibly go. Now, Monte's testicles are dead and we wait for them to fall off. Encouraged by the success of weathering Monte, we did the same to Leo.

It is important to note, that in order to keep our male goats, we must weather them. If they breed with our female goats, we take the risk of having baby goats with mutations. This would be unfair to a new life, if we could have stopped it. If elastration is done properly, which we have done, there is no pain involved. All animals on a farm must make a contribution. We look forward to having at least one of our male goats pulling our goat cart at Millstream Farm.



Sustainable Dave By Youssef Amer

Recently, Dave Chameides, who goes by “Sustainable Dave,” visited the farm to help make us aware of how much we humans waste and how we can improve. Dave has an engaging way of talking about big topics while making them understandable to different age groups. A topic that drew me in was vampire electricity, which is when after charging your phone, or laptop or handheld gaming system, you unplug your device but leave your charger in the wall. You think you’re ready to go, but these chargers left sitting in the wall continue to use electricity, for nothing. Simple, harmless gestures, like unplugging chargers and turning



off lights can make a difference. Then there are coffee cups! Most end up in landfills. Most coffee shops offer discounts on drinks if you buy their reusable cups. Better yet, you can save money and make your own coffee at home. Overall, Dave was a nice person with very interesting points. His speed-talking actually hooked me into the topics more. You can check out Dave’s blog where he talks about his project “Away” - saving his trash for a year to figure out where “away” really is: <http://365daysoftrash.blogspot.com/>,

barn.

Junior Master Gardener By Scott Black

During the year we have done experiments and activities in order to receive our Junior Master Gardener certificate, which is part of the university cooperative Extension network. We have done many activities including making booklets of leaves, dissecting flowers and making a bio jar, which is a closed system that can sustain its own cycle of life. We also fertilized a flower by getting a paint brush and rubbing it on the anther to collect pollen, then dabbing the stigma of the same type of flower with the pollen. The certificate was challenging to earn but felt good to finally finish all of the steps.



The River Walk

By Emily Kruzcek

A few days ago, for recess, we decided to go out to the Nepaug River, which runs through the field next to the farm. None of us were dressed accordingly for swimming, but lots of us still managed to get wet, especially Madi, who purposely swam in the water. I wasn't planning on getting wet but I ended up wading past the height of my boots. I didn't mind. I actually liked the feeling of water sloshing around on my feet. At one point the water came up almost to my waist. We waded around, and climbed over, fallen trees. We spotted various animal tracks on our journey, including deer tracks, turkey tracks, coyote tracks, raccoon tracks with baby raccoon tracks, and possibly bobcat tracks.

We also saw a few pieces of interesting trash like a giant rusty jug, a plastic telephone, and a toy boat. We took the items back to the school. All of our shoes and socks were covered in sand and dirt. With the garden hose, we sprayed our socks and the soles of their sneakers and boots. Of course, some of us got wetter than necessary! My boots are still soaking wet and it has been about four days.



Companion Planting

By Cole Binzer

In the fall, each student was assigned a garden bed, took a handful of soil from the bed and put it into a bag. We then sent it to UConn, where it was tested for nutrient levels and pH. This spring we amended the soil according to the test results and are planting vegetables and flowers of our choice in our beds. We did research on “companion planting” and then made a choice of two companion plants that would grow well together. In my case, I really wanted to plant carrots, so then I found a companion plant for carrots. I settled on tomatoes because they provide shade to the carrots, which are heat sensitive. Also carrots break up the soil so more water and air can get to the tomatoes' roots. I ordered my carrot seeds from High Mowing organic seed™. I ordered the resistafly FI, and the napoli FI; and, as soon as they arrived, I planted

them. I hope that in the next two weeks they will reach a mature height, and I can harvest and eat them on our last day of school.



Maple Syrup

By Madi Thomas

We recently sold \$375 worth of the maple syrup we made in March. It was painstaking work to collect the sap and boil it down. It all began in a bright classroom in early spring. The maple trees at the farm swayed in the cold breeze. We students sat at a table and listened carefully to our teacher's instructions. She was preparing us to tap the trees and collect sap for the delightful taste of maple syrup, and we needed to understand the anatomy of a maple tree to do it right. I couldn't wait. I was fidgeting in my chair as excitement crawled up and down my skin. We finally were able to go outside and tap the trees. I flew out the door. The ground was covered in layered sheets of white snow and the cold air stung my skin. I grabbed the drill with two careful hands and put the sharp metal end up to the tree. I began to drill a steady hole, watching intently as tiny wood particles exploded into my determined face. Next, I placed the spile (tap) into the newly created hole and hammered it in until it was snug. I stared at my beautiful work before hanging the bucket on the spile. We spent weeks collecting the sap, carefully wheeling the wagon that transported our liquid delicacy to the barn. We poured it into a big, blue barrel. We had to be very careful not to spill the sap. Finally, we began to boil the sap to convert it to syrup. It takes 40 liters of sap to make just one liter of syrup! The air was hot and sticky, with a sweet smell to it. Finally, we bottled the syrup for sale, making sure to leave enough for our pancake feast in the classroom.



The Middle School's Study of the European Migrant Crisis

By Sophia Dyer

For the past few weeks, the middle school has been researching the migration crisis in the Mediterranean, as migrants from the Middle East and northern Africa leave shore by boat and risk the trip to Europe. Using sources such as *The New York Times*, we have read about the lives of individuals being trafficked across Libya, Sudan, Eritrea and other African countries. These migrants, including some children traveling alone and as young as eight years old, all have had to make sacrifices in order to cross the Mediterranean. During our study we were split into groups of two to read about different journeys experienced by the migrants; at the end, we presented what we had learned to the class. We also read about possible solutions to the problem, some suggesting military force, others suggesting a physical wall keeping the migrants out. We then wrote a paper voicing our opinions and solutions.



Physical Sciences By Waveris Thomas

In physical sciences lessons with Steve, we learn a new topic every time we meet. If we discuss gravity one day, we discuss friction the next. By slowly going from topic to topic, we can easily retain information that will help us when it comes time to build Rube Goldberg machine. When physics class comes to an end, we sometimes have a test so it is clear we have valuable information to apply to our project. Physics lessons are always great to participate in and will absolutely help us to do awesome things with our brains.

Vernal Pools

By Jack Freedenberg

When we went to study the vernal pools of Aton Forest, in Norfolk, I thought that we were going to go straight to a vernal pool. I was wrong. The first thing we did was get some background information, which I thought was very helpful. We learned all of the different nicknames for vernal pools and that they are ephemeral spring bodies of water that dry up in a few months. I also learned many of the genus/species of animal life that live



in and around vernal pools. The spotted salamander, *Ambystoma maculatum*, is the largest salamander in the vernal pools of Norfolk. After the lesson, we went to take data from a pool, complete with egg masses of baby salamanders and frogs. We counted and recorded the egg masses. On first count we only got about four salamander egg masses and fifty or so frog egg masses. But with a closer look we counted eleven salamander egg masses and sixty eight frog egg masses.

The Drone Visit By Therese Brady

We first met Dr. Shawn London when he came to our farm in April to do an ultrasound on our pregnant goat Poppy. But he came a second time, and he wasn't looking for any more baby goats. He brought his drone to help us with aerial photographs of the sheep pen and fields so that we could plan fencing and other projects. We flew it over our sheep pen to see if we had any more space for them. We also wanted to see if we had room for a donkey or a mule. He brought goggles that allowed us to see what the camera in the drone was seeing. So we felt like we were flying, soaring over treetops and the river, looking down at the fields and at ourselves. It was cool!





Goat Kidding

By Anna Foster



In the past two months, our two pregnant does gave birth, one to twins and the other to triplets. Annie had her twins on a Saturday, the day before Easter. We got a call from Sophia telling us that Annie was in labor and if we wanted to see the birth, we should come quickly. Only a few people made the birth but most came after to see the newborns. Sadly, I was on vacation so I wasn't able to be there. The boy was first and he was so big he needed a little assistance. Caren said

that he was the biggest goat baby she had ever seen! Soon after, the girl came, but since she was slightly smaller, it was an easy birth. The babies were licked clean by their mother, had their umbilical cord cut and tied, and started to nurse. Both babies were big, strong and healthy, and grew fast. We ended up naming the boy Monte and the girl Luna.

Poppy had her babies on a Friday after school. We had been preparing for a weekend birth, getting everyone's phone numbers on a list so that I could call everyone if Poppy went into labor, when Scott went to check her one last time. He ran into the classroom and told us that Poppy looked like she was experiencing the first signs of labor. We all ran out to the barn and Caren confirmed it. Since the birth can take a while, we all bundled up in our jackets since that day was quite cold, found stools and got comfy around the pen. It took a long time, but Poppy finally gave birth to her first baby. This birth was easy and a beautiful, black, healthy, baby boy arrived. We cared for him and let him back to his mom expecting it all to be over. We were wrong. In an ultrasound, we had seen only one baby, so we weren't expecting any more. Sur-



prisingly there was another one. After another easy birth, we had a small but healthy girl. And then, incredibly, about an hour after the second goat, we saw even more hooves. This baby was stuck, though, and needed help getting out. Though smaller than her siblings, she seemed surprisingly fine, and soon latched onto her mother's udder. We named the boy Leo, the first girl Elly, and the second girl Lucky.



Now though, we have two problems: Poppy is overwhelmed with the feeding of three babies, and she is favoring the boy. He is fat while the other two girls are quite skinny. We've been helping the babies by letting them nurse while Poppy is on the milking stand and it seems to have been working. At least the girls aren't starving.

Our other problem has to do with Lucky. She seems not to have gotten enough colostrum, (the first milk out of the mother that contains antibodies to fight diseases). Lucky has been sick lately and her fever has been going on and off. We've been giving her medicine but it doesn't seem to be

working too well. We just hope she can pull through and gain some active immunity to diseases herself.

Overall, our babies are pretty healthy and they are all super sweet. We have castrated Monte and we will most likely be keeping him to pull our goat cart. This year was Annie's last year of kidding and she will be retiring, so we may keep either Luna or Elly in her place.







Have a beautiful summer and see you in the fall!

