



# Adolescent Program

Guides: Alex Pape, Melissa Pavick and Caren Ross.

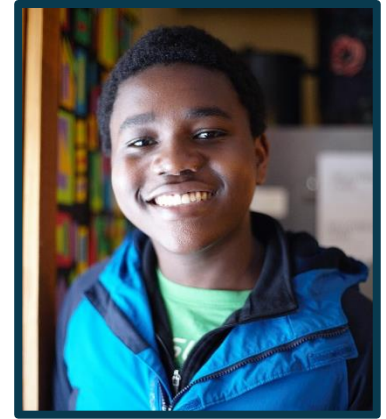
2024 Spring Edition

Dear MSGH community,

At the farm we know spring is just around the corner when the maple sap is flowing, an ultrasound confirms a goat pregnancy, the longer daylight hours increase the hens' productivity, the sheep start to need a shearing, the pond thaws, the seed catalogs arrive, and we start to see the honeybees out and about on cleansing flights. These harbingers of spring are shout-outs from the natural world to listen and pay attention, to work harmoniously with the systems and cycles around us and to soak up the message and spirit of renewal. That is part of our mission as Montessorians, and it happens in a context of work and study suited to the nature of the adolescent. In this newsletter, you will have the opportunity to dabble vicariously in life at the farm and to hear from the adolescents themselves about what goes on -- what they care about, and what they think about. Through it all are reflections on the adolescents' studies and creative expression-- the classes and lessons, the art, the music, the fitness, the joy and variety of life.



# Student Articles



## **Candy-Making** by Kosi

At the farm, we've just begun tapping maple trees and boiling their sap to make maple syrup. In order to learn more about sugar molecules, carbohydrates, crystallization, and more, we've been creating candy and writing lab reports on our candy-making experiments. We made butterscotch, taffy, gummies, rock candy, and more, all while learning the interesting science behind them and whether we can incorporate a maple solution in a new type of candy for sale.

Basic candy is made by boiling water and sugar, often creating a supersaturated solution. Fudge, rock candy, and glass candy are all made this way. However, the difference between the different candy types is how big the sugar crystals are. Rock candy has large crystals, fudge has small crystals, and glass candy has tiny crystals. Acids and fats can interfere with crystallization and make a smoother texture, so can the rate of cooling.

After experimenting with published recipes, we designed our own recipes, manipulating sugar, water, and other variables based on what we'd learned. We created some delicious confections – as well as some failures!



## **Literature** by Ruth

Books and the stories within them have always been a part of education. Here at Millstream Farm, we have immersed ourselves in many kinds of literature. This year we have read novels, many of them taking place in the past. We started the year with a novel written in verse by Karen Hesse, *Out of the Dust*. Then, we turned to a literary classic, *The Pearl*, by John Steinbeck. We ended 2023 with another classic, *Treasure Island*, by Robert Louis Stevenson. Now kicking off 2024 with a bang we are reading *Roll of Thunder Hear My Cry*, a novel about the South in the 1930s by Mildred D. Taylor.

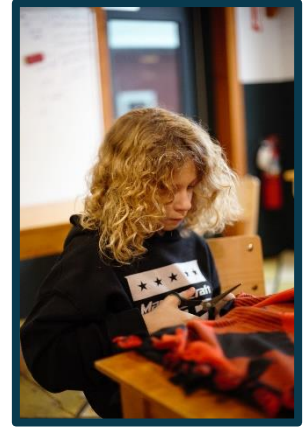
During Lit class, we discuss the reading from the night before. We talk about symbolism and the actions of characters. The students share their opinions and thoughts with their peers. Once we finish our book, our guide, Pape, guides us through writing literary essays. All of the students enjoy

and participate in lit class, whether it is putting in their thoughts about the antagonist or helping a friend find a quote.

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## **Art Class** by Aiden

Art class is a way for us at Millstream Farm to express ourselves and show off our artistic power. Recently we have been working on fantasy maps and making claymation. The claymation productions are based on the founding of America. The thing I love about art class is the way we can express ourselves. Art class is one of my favorite subjects at Millstream Farm and one of my favorite things to do. My peers and I usually get to go outside and enjoy the sun and the sound of relaxation while we observe and sketch. Our cats, Oliver and Clover, follow us on art walks and enjoy sitting with us and helping us with our art.



## **Algebra and Arithmetic at Millstream Farm** by Stella Mae

When I first began my curriculum in algebra at Millstream farm, I was hesitant when I thought about how I was going to learn about functions and linear equations when I was at least four levels below my grade expectancy in algebra. In retrospect, I could have averted a great deal of stress if I knew what an inclusive, patient, understanding, and all-embracing academic guide and humanitarian Ms. Melissa Pavick, or my algebra teacher was. As someone with dyscalculia who has always had a great struggle in the area of any numerical problem, I was taken aback by how interactive and interesting these algebra classes are. During a typical day in algebra, the lesson revolves around algebraic lessons that are very helpful for my and numerous others' learning style; a visual presentation that dissects the content in a clear, perspicuous design dissecting the method and elements behind a problem in algebra, that is graspable for all learning styles. For example, whereas the majority of "traditional" or formal methods of teaching, (encompassing learning in the standard format of homogenizing learning into a too-small box that does not properly acclimatize to all minds,) would be following the common core, Ms. Melissa understands that the method that Dr. Maria Montessori has pioneered. Ms. Melissa's class introduces algebra and quantitative thinking in a way that caters to children's natural interests and activities. I never thought that algebra would be a class I enjoyed or comprehend. But Ms. Melissa's algebra class is fun, interactive, and educational in ways I



never thought possible. If you are a student with similar struggles in any area, such as algebra, humanities, or arithmetic, you can trust Ms. Melissa to thoroughly dissect everything from linear equations to functions to PEMDAS. I have learned so much in this class, and have learned to enjoy math with Ms. Melissa, who always manages to help things make a little more sense.

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## **Humanities Field Trip** by Maya

We went on a field trip that intertwined civics, Spanish, and Humanities. We first went to the Noah Webster House and learned about the culture and common practices of the colonial Revolutionary War period, including hearth cooking. We also learned about Noah Webster, the author of the first American dictionary, and his importance in early America. For lunch, we ate at a Peruvian restaurant, Cora Cora, and indulged ourselves in delicious food. After lunch, we headed over to the Legislative Office Building and the Capitol and attended a guided tour. At the end of the day, we had a better understanding of history, language, and government, leaving us inspired by the diverse experiences of the day.



## **Español** by Jasper

Spanish class is constantly enjoyable and infinitely educational. I have learned more Spanish in five months than I ever imagined. In class we are allowed to talk as long as we speak in Spanish, and this makes us want to learn and makes us excited to show our knowledge in each and every class. Recently we went to Cora Cora, a Peruvian restaurant where we were served by lovely waiters speaking Spanish. We also ordered and spoke in Spanish. This authentic experience has deepened our understanding of the language. Caren is always a supportive help to us in our endeavors to become bilingual. She suggested Duolingo, a tool that me and many of my fellow adolescents have found quite helpful in our process of learning. She helped a handful of us make churros, and this culinary experience has been fun, educational, and delicious. Thanks to Caren's exquisite guidance, our understanding of the language and appreciation for the people who speak it has greatly increased, as well as increasing our enjoyment of trips to the Spanish speaking world.

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## **Knitting** by Sandrine

In January the class started knitting on Wednesdays after gym with Rebecca London to develop concentration, dexterity, and peace of mind. Some of us already knew how to knit and everyone else is learning fast. We have been making hats, scarves, and even little gingerbread houses. We are using the wool from our old sheep, Casper and Snoopy. Their wool was washed and carded. Some of it was sent to a mill where it was turned into the yarn we are using to knit. The wool that isn't turned into yarn, called roving, is used for felting. Some of our wool goes to the Connecticut blanket project, which involves setting up a loom at UConn to make scarves and blankets that we sell. In May we will get more yarn when we shear our new sheep, Mary and Dolly.

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## **Micro-E** by Dillon

At Millstream we students run a business with some help from Pape, who also does creative writing and literature. In a class called Micro-E, which stands for micro economy, we harvest, plant, plan, sell, and create items that we sell. Currently we are tapping trees to make maple syrup. Recently we have made caramel sauce from goat milk, hand cream, bath salts, and lip balm. Using the money we make from



Micro-E, we buy ingredients for our community lunch, which is every wednesday. Over the course of the past few months I have learned a lot from Micro-E including tapping trees, making jelly, making lip balm, harvesting mushrooms, making caramel, and a lot more.

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## **Open Time at MSGH** by Tyler

At MSGH, we have open time. A lot of schools don't give open time to middle or high schoolers, but we do! The farm owns several acres of land, from untouched woodland wilderness and floodplains to livestock pens and ponds, streams, and rivers filled with trout, minnows and crayfish. Our recess is after lunch for about thirty minutes. Some of the students like to play tetherball with our pole, basketball in the barn by the sheep and chickens, or soccer on the side yard. There are several ponds, some with fish. Two of the three ponds are very small, one on top

of the other. They are completely clear and cool, and until recently, there was a school of about twelve trout and their fry in the top pond. They jumped the stepping stone dam and moved downstream to the lower pond down the hill. The area around the ponds and streams is always squelchy, and there is a nice little pavilion by the stream. I like to fish down there, and I caught a six-inch fathead minnow! The favorite game of everybody at the farm is to play hide-and-seek tag. Hiding in the barn, field, wetland, and trees is so much fun for us, and we are all good at it. Most of the kids have a strategy of always moving around a lot so that they don't get tagged, but I tend to hide in a completely shrouded place, with lots of plants and bushes all over it. Every game I hide in a bush or tree, and the taggers can get so close to me I could touch them. Plant life is also good for ambushing people. The barn is a great obstacle course of electric fences, cattle gates (we don't have any cows, actually), animal pens, and wooden doors. It's really easy to lose someone tailing you in this man-made forest of lumber and metal. Just today I hid in the chicken coops for two rounds in a row, and nobody found me! At recess, some people monitor the sap we boil that we acquired from the maple trees. And in the winter, when the ice in the huge pond is just thick enough, we bring our skates and helmets and go ice skating! And after a little while, somebody rings an old antique bell we have and everybody goes in to start our afternoon rotations.

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### **Physical Education at Millstream Farm** by Luca

Every Wednesday students gather around our teacher Mr. Bill and get ready for gym class. We start the walk to Brown's Corner. Brown's Corner is a park near our campus. Some students run to the front of the line, while others lag behind talking and laughing. Sometimes when it's warmer, students bring out the basketball on the court and start swooshing mad buckets, while taller kids dunk on the small folks.

In colder weather, however, the basketball court turns into a hockey rink, which is where master chefs Luca and Fred like to cook. Snapping ankles and cracking dekes plastered the opponents' self-esteem as another goal had been scored. The damage has been done. At the end, we all shake hands, as another loss is another forgotten memory. Near the summer months, students have played games like Capture the Flag, soccer, and flag football.



## **Creative Writing** by Beckett

I love creative writing because you can make your own story and anything you want. The stories that I hear and make are creative. I never thought creative writing would be fun but I love it. There are so many possibilities for generating stories from your mind. It's cool seeing what I can do as a student and what I can do with my writing. Some things I wrote were scary stories and an adventure story. Here is a favorite part of my scary story. "Thirty years later to this day I never told my parents about my weird dream, but I still think it's real to this day." The story goes on to describe how the narrator's parents were killed in the dream by someone that she still does not know.

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## **Community Lunch** by Fred

With community lunch every Wednesday, we've dived into many cultures while coming together as a community to make food for everyone to enjoy. From flatbread pizza to Vietnamese spring rolls, we've learned to work efficiently together. With countless opportunities to make whatever is desired that week, we split up into multiple groups. While one group ventures out into the garden to harvest crops for a meal, the others prepare the kitchen by wiping down the counters and setting the ingredients out to thaw. It was only a few weeks ago when we first incorporated meat into one of our meals. In community lunch, we made Indian butter chicken. After a crash course on fileting a chicken breast, we began. Used knives and dishes were carefully placed in our sanitizer as we worked, allowing for a quicker clean up. The butter chicken dish was finished before the other half of the class was dismissed and we made a quick pivot to a goat milk pudding. The day following the community lunch, the receipts from the supermarket are looked over and feedback is enthusiastically provided. We are always striving to bring the community together through a love of learning, work, and food.



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## **Tapping Maple Trees** by Harrison

For the past few weeks, we have been tapping maple trees. We all have picked one tree to collect data on. We measure how much sap we get from each tree each day. We have tapped



over 30 trees – double the number of kids we have at Millstream. The way we knew it was maple syrup time was the freezing temperatures at night followed by warm days, which makes the sap flow. After we get off the bus, we either do projects or do barn chores. The people on projects go and collect the sap from the buckets, bring them down the hill, and dump them into a big bucket. Then we put the sap in two big, flat metal pans on an old stove and evaporate the water away until what's left is 66 percent sugar. After that, we filter the syrup, test its density, and that is your maple syrup.



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### **Irrigation System** by Eli

My dad, a mechanical engineer, spent weeks at Millstream, helping us design and build an irrigation system for the garden. For all the time that I have been here, my classmates and I have had to water the garden by hand or use a sprinkler, which did not water the plants very well. The sprinkler wasted water as well as getting water on the leaves that can cause sickness to spread among the plants. The irrigation system gets rid of both of these problems. It automatically waters the plants with a timer and has adjustable nozzles on the end to give different plants different amounts of water. The nozzles are positioned below the plant and deliver water directly to the roots. Once this irrigation system is implemented, it will not put water on the leaves and will not need any human input. To put it together we have to connect hundreds of pipes together with pipe connectors. However, with the entire Millstream community working together it will only take about a week to assemble and another week to put it in the garden.



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### **Animal Affection** by Kylie

Farm animals are mostly known for their products, such as milk, fiber, and meat, but they are good for much more than that. Usually, farm animals that live outdoors in fields wander off somewhere without human contact and are uncomfortable when it comes to handling them. Here at Millstream Farm, we try our best to make the animals familiar with humans so they don't live a stressful life when we handle them. Animals are great for stress and anxiety relief. Farm animals and house pets provide a non-judgmental space to relax



which can be a great space to be in. For me, and lots of other people, spending time with animals reduces anxiety levels more than any other relaxing activity. Animals make humans release a lot of dopamine when they are together and show affection.

