

Education Update

February 2020

Financial lab opens at high school

Sophisticated technology transforms renovated MOHS classroom into a financial info hub

MOUNT Olive High School's new financial literacy lab is putting the high-tech tools of finance at students' fingertips. Outfitted with laptops, big screen monitors, and a digital stock ticker that spans the back wall, the renovated classroom was ready for business in early December after the final technology upgrades were made and new furnishings installed.

The financial lab is used by students in Finance Honors, Accounting I, Accounting II Honors, and AP Economics. Walk into the room on any given day and you might see students researching companies and completing simulated stock trades. Or you could see students analyzing in real-time how world events and economic decisions affect global markets, or comparing interest rates and gross domestic products of various countries.

The financial services and banking industries run on data and analytics. The courses in the financial lab train students on what to look for, where to find it, and how to process it. The school also subscribes to several professional services which provide the same type of real-time information and financial instruments used by experts.

"When kids come into my class, they



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Dr. Robert Zywicki
Superintendent

know that even if they don't plan on pursuing a career in finance, what they're learning is valuable and has real-life applications," said business teacher David Silverstein. "They understand the importance of it. I always say that school trains students to work for money, but my classes teach students how to get money to work for them."

Mount Olive High School has made technology and innovation its touchstone; the financial literacy lab represents an opportunity for students to explore a high-tech career pathway of a vastly different kind than others available in the building.

"When you think about science, computer coding, and math, finance doesn't necessarily spring to mind," said Dr. Robert Zywicki, superintendent of schools. "However, those competencies are indispensable to careers in the banking and investment sectors. In the new lab, students learn to use technology to access mountains of real-time data and run sophisticated analytics, then put their critical thinking skills to use to process it all. As an added benefit, they also see the value of managing their money well. That's a life skill that everyone could use."



MOHS junior Freddy Huang works in the financial literacy lab



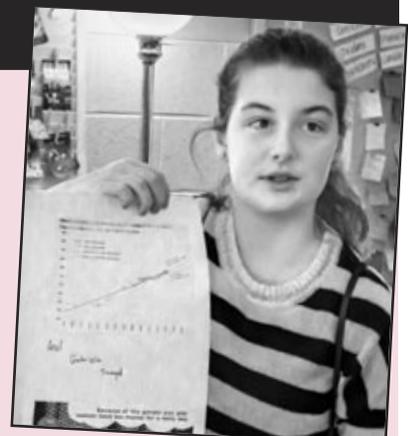
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AT MOMS

Eighth-graders find issues they believe in

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Passport to learning

A traveling penguin is helping first-graders at Sandshore Elementary School hone their math skills and learn about the world. Jiji is the digital mascot of ST Math, a web-based program that provides interactive puzzles which help students practice their problem-solving. For every 10% of the ST Math curriculum the first grade classes complete, they receive a digital postcard from Jiji which describes her latest location. Each postcard is an opportunity for the teachers to conduct a mini geography lesson and discuss the reasons that make each of Jiji's locales a popular destination for tourists.

The digital stamps from the postcards are printed and students paste them into passports. Students have received postcards from places as Kjeragbolten in Norway, Giant's Causeway in Northern Ireland, and Carlsbad Caverns in New Mexico.

Students in grades 1-5 use ST Math for about 90 minutes per week to augment their learning. The platform allows each student to move at his or her own pace. If students select incorrect answers, ST Math's animated feed-



Claire Hanson concentrates while solving a challenge in ST Math

back offers insight and rationale.

Through ST Math's dashboard screens, teachers can monitor the progress of each student. The dashboard indicates the current skills that the students are working on (e.g., measurement and data, geometry) and alerts teachers in real-time to the kids who are struggling. This allows teachers to provide help at the exact moment when students need it.



Ali Eppinger discusses with her a.m. kindergarten class an experiment that uses leftover holiday candy

Science with leftovers

LEFTOVER holiday candy recently became the subject of a science experiment for kindergarten classes at Mountain View Elementary School.

Teachers placed candy canes in four types of liquids and students observed the results to see which dissolved the candy the fastest. Like all good scientists, the kindergartners made their own predictions of the outcome before the experiment began. Would it be cold water, hot water, cooking oil, or white vinegar that would be the most effective?

Making the hypotheses also invested the kids in the results. They keenly watched the

clear cups for signs that the color from the candy was stripping away as the sugar dissolved.

After a few minutes when the candy canes were removed from the solutions, the winner was crowned. The stripes on the candy cane that was immersed in hot water were nearly gone. Hot water for the win.

"I wanted to get my students thinking like scientists," said teacher Ali Eppinger who coordinated the activity. "I wanted them to learn that experiments don't have to be complicated; they can be done using everyday items."

IN THE NEWS

CMS chess team takes first place

The fifth grade team of Chester M. Stephens Elementary School's chess club recently won first place in the New Jersey K-12 Grade Championships. Vihari Bhattaram, Saanvi Borra, and Ryan Ciafullo won individual medals at the event, which was held at Brookdale College in Lincroft.

Vihari, Saanvi, and Sampath Sajja represented the team at the National K-12 Grade Championships in Disney World and finished in 12th place.

This is the chess club's fifth year. Coordinated by adviser Koumari Nichinakolla, the club currently has 32 members and meets four days per week.

Inclusion expands in grades K-5

This school year, the district's elementary schools have expanded inclusion – the practice of integrating special education students into general education classes for most or all of the school day. Seventeen additional classes have adopted a co-teaching model that pairs special education teachers with classroom teachers to deliver instruction and provide instructional support; that's more than double the number of inclusionary classrooms from 2018-2019.

"The benefits of inclusion for both special education students and general education students have been proven in extensive research over the years," said Sharon Staszak, director of special services. "Both groups make more progress, show more empathy, and are better skilled at working collaboratively. The benefits are academic, social, and emotional."

Inclusion reduces the need to pull out students for specialized remediation, which helps maintain the continuity of the school day. And with two teachers in a classroom, all students can readily find support to meet their needs.

"Our students do not know that one of us is a special education teacher and the other is a general educator," said Samantha Darnesto, a teacher at Tinc Road Elementary School who is co-teaching third grade with Michele Schoch. "We believe we're responsible for the education of all of the students in the room. It's essential for the kids to feel that we are equal in the classroom and that they are all equal, too."

Co-teaching shifts the instructional process in a fundamental way. The educators bounce ideas of each other, map out lessons together, and formulate strategies to address the needs of all students. They're partners in the classroom in every sense.

The teachers adopting inclusion this school year were trained for several days over the summer in collaborative teaching and best practices for differentiating instruction.

Unity and equality come into focus at Tinc Road

AT Tinc Road Elementary School, fourth-grader Michael LaBruna stood in the corner of his classroom, away from the circle of his classmates who were sitting on the rug. He had just walked through the door after delivering the daily attendance roll to the main office and was directed to the humble spot by his teacher, Rebecca Hopler.

Michael wasn't the only one separated from the group; Mia Padron, with her unique pink clipboard different from everyone else's, was already sitting at her desk. Moments later, a half-dozen students all wearing glasses would also be sent to their desks as the remainder of the class continued its morning meeting.

Around the corner in Megan Manley's second grade room, half the class who had randomly chosen to be in the Stars group sat quietly on the carpet. They watched as the other students who had chosen to be in the Smiley Face group danced to GoNoodle (an internet activity site) and were allowed to eat at their desks, the ultimate privilege in Ms. Manley's room.

A few doors down, the blue-eyed second-graders in Amy Rust's class were playing games; their brown-eyed classmates sat quietly reading – and wondering.

Children by this age have developed a mature sense of fairness and equity, and the preferential treatment of one group versus another didn't sit well. To them, using superficial differences to determine class liberties seemed arbitrary.

"It was weird," Michael said. "I felt like I was in trouble and I didn't know why."

The purpose becomes clear

Slowly in each of these classrooms, the whispering spread as the students realized the rationale for what was taking place.

"I could almost see the

lightbulbs going off in their heads one by one," said Ms. Rust.

Sometimes students find it difficult to conceptualize social history, so these three teachers had independently chosen an activity that would help their kids better grasp the school day's focus: This was Martin Luther King Jr. Day and the students would learn not just about Dr. King's life and legacy, but of the civil rights movement and a time not long ago when society was radically different.

No one can truly understand the struggles of ethnic and racial injustice unless you face it and live through it; that can't be replicated in an educational setting. However, while lasting just a few minutes, the classroom simulations helped students experience and better grasp the concepts of discrimination and segregation – in a limited, age-appropriate way.

"I told them 'You just felt for one minute what others feel their entire lives,'" Ms. Hopler said. "The room was so quiet, you could honestly hear a pin drop."

That silence, which rang loudly in all three classrooms, was born from a revelation made at both the cognitive and emotional levels.

"It truly hit home with all of them," said Ms. Rust, who has conducted similar exercises many times throughout her career. "It always does."

Debriefs are essential in simulations in order to appropriately contextualize the exercises. Before moving on to the activities that were planned to honor Dr. King, the veteran educators spent time guiding students through an exploration and discussion of their feelings.

"I was so sad," Mia said about her experience sitting alone for several minutes at her desk. "It's hard to describe. But it really made me think."

According to the teachers, the students who were in the privileged groups empathized with their peers who were not. The kids wanted their classroom and their friends to all be one big happy family again. On Martin Luther King Jr. Day, what more could you ask for?



Students lead lessons inspired from MLK

Student-taught lessons about respect, diversity, and kindness highlighted Mountain View Elementary School's honor of Martin Luther King Jr. Day. The lessons were delivered by the school's kindness ambassadors, a group of two dozen fifth-graders who assist with schoolwide service projects.

Working in teams of two, the ambassadors visited every classroom in the building to teach and lead related discussions and activities. A clip from the film adaptation of the novel "Wonder" and a video reading of an associated book anchored the presentations. "Wonder," a tale of a young boy with a craniofacial deformity who begins public school, led to discussions with fourth- and fifth-graders about the appreciation of our differences. "We're All Wonders," a picture book that explores the uniqueness of everyone, was followed with discussions about kindness, individuality, and empathy.

School counselor Kate Devins coordinated the lessons.

Above, fourth-grader Tessabelle Paetzell completes an activity about kindness

Eighth-graders take social stands

- The right to bear arms
- Child labor
- Armed teachers
- Police brutality
- Gun control
- LGBTQ rights
- Climate change

These are just some of the social issues that eighth-graders at Mount Olive Middle School recently researched, documented, and wrote about as part of an English language arts assignment.

The classes read the Newbery Medal-winning novel, “Roll of Thunder, Hear My Cry” which explores racism and life in rural Mississippi. ELA teachers then engaged their students with an activity that allowed them to express their own thoughts and feeling about an important issue, much as Mildred D. Taylor had done in “Roll of Thunder.”

“We want kids to become interested in the world around them and learn how to powerfully express their views,” said teacher Debra Dickerson. “With this project, we wanted them to take a stand.”

The teachers developed a list of social causes and asked the eighth-graders to select the ones that most interested them. Based on those preferences, the teachers formed teams of two and three students and sent them off to research the topics.

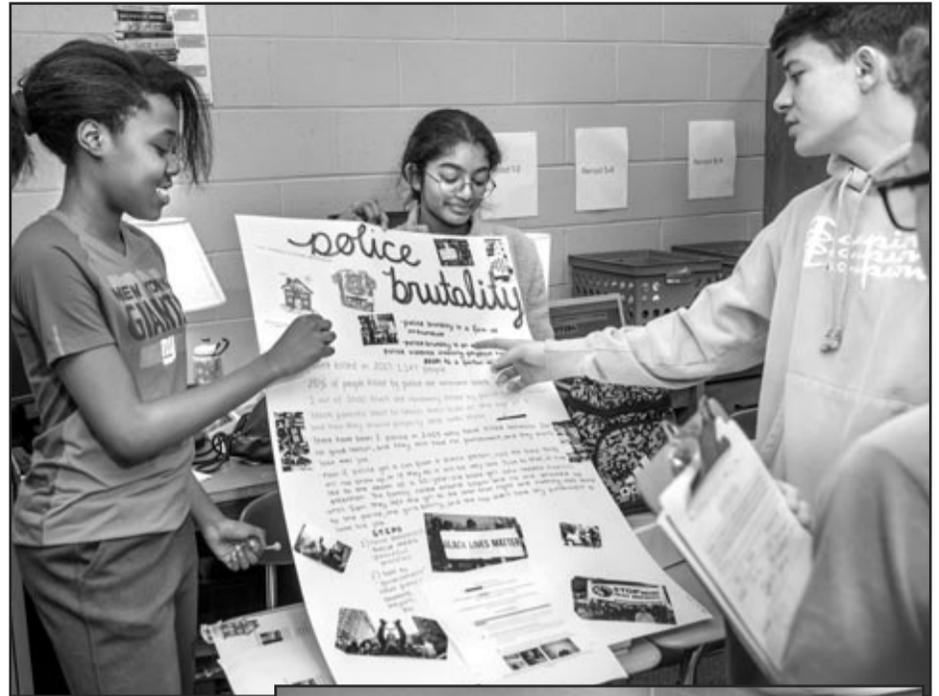
Many students, such as Christopher Tava, were already connected in some way to the

issues they chose.

“When I was in Las Vegas, I went to the shooting memorial that was set up [honoring the victims of the 2017 incident],” said Chris, who researched gun control and gun violence with Mia Obelink. “I was really moved. People don’t take the issue of gun control and background checks seriously.”

The teams documented their research and took positions, which they presented on posters and in one-page fact sheets. During a gallery walk, all the students went from class to class to view each other’s work and to hear their peers summarize their stands.

As a culmination to the project, the students wrote essays about the importance of their causes.



Above, Roniel Osei-Poku and Synthia Mani discuss police brutality with Jacob Iacono; **right,** Mia Obelink and Chris Teva show Julia Smith and J.P. DiManno stats about gun violence



Exploring how the world works

KINDERGARTNERS are just beginning to explore the world and understand how it operates. Recently, kindergartners at Chester M. Stephens Elementary School engaged in physical science activities to learn about the forces of nature.

After learning the definitions of words such as gravity, friction, push, and pull, the young scientists constructed simple models that helped them understand and demonstrate the concepts. Using K’Nex building sets, the students worked with partners to build ramps and swings. They rolled balls down the ramps on different surfaces including a tile floor and a rug to examine how friction influences a moving object. Using the swings, the students saw push, pull, and force in action.

“They loved being able to take pieces and build something, and do what they had learned,” said teacher Jen Alder.

After the experiments, the kindergartners discussed with their teachers what they had observed and learned.



Madison Bradley and Gianna Pugliese work together to build a swing