

Haddam Killingworth High School

March/April 2019

From the Principal...



March has seen a flurry of activity at HKHS with April promising to be just as eventful! Spring sports have started, as has preparation for the spring musical. Seniors are making decisions about which colleges they will attend and the administration is putting the finishing touches on the 2019-20 master academic schedule. A few of our current highlights are featured in this letter.

TOP HONORS ANNOUNCED!

Michaela Flaherty, daughter of Robert and Cathy Flaherty of Killingworth, has been named the Valedictorian of the Class of 2019 at Haddam Killingworth High School. Throughout her time at Haddam Killingworth High School, Michaela has earned a 4.26 GPA while taking 28 honors and advanced-level courses. Michaela is the recipient of the Harvard Book Award, Superintendent's Award, Shoreline Outstanding Junior in Mathematics, and the 1st place winner of the Shoreline Writing Contest. Michaela is the President of Current Events Club and the Vice President of Student Council, both of which she has been a member since 9th grade. She is also a member of the National Honor Society, Spanish Honor Society, Human Relations Club, and is a class officer. Michaela is extremely involved within her community. She participates in the Hugh O'Brian Youth Leadership Foundation (HOBY) and volunteers at Yale New Haven Hospital. Along with volunteering and having a high academic demand, Michaela currently works at Cohen Bagels which she enjoys very much. Although Michaela is currently deciding between colleges, she will be following her passion by majoring in History with a future goal of obtaining a Masters Degree.

Nolan Serbent, son of John and Michelle Serbent of Killingworth, has been named the Salutatorian of the Class of 2019 at Haddam Killingworth High School. Nolan has flourished having taken on an arduous schedule, including 25 honors and advanced-level classes, culminating in a 4.15 GPA. Nolan has received numerous awards for his academic achievement including the HOBY Leadership Award, the Frederick Douglas and Susan B. Anthony Award of the University of Rochester, and the Shoreline Outstanding Commitment and Achievement in Social Studies. Lacrosse has always played a prominent role in Nolan's life. He was the first team-elected junior captain of HKHS boys lacrosse in program history. Nolan is a member of the National Honor Society as well as a leader of our Cougar Den, a group of students who aim to support our sports programs. He is a member of the A-Team, Student Council, Environmental Club, Human Relations Club, and is the Class of 2019 Board of Education Student Representative. In his free time, Nolan relishes expressing himself through the arts. He is an avid writer as well as composer of music. He plays the saxophone among

other instruments. Every once in a while you may hear Nolan play the guitar or even the piano. He enjoys the outdoors, as well as spending time with his family and dog. Nolan plans to attend Brown University in the fall of 2019. Although he does not know what he will study, his goal is to exercise his creativity while striving to benefit society in some manner.



THE HKHS STUDENT TUTOR CLUB IS UP AND RUNNING!

We have over a dozen student tutors who have been meeting with peers to help with their classes. Students are available to tutor a variety of subjects including math, history, science, and languages. We also have several upperclassmen who are willing to peer edit papers written for English and history classes.

Students who are interested in meeting with a peer tutor for help in one or more of their classes can sign up for tutoring in room C213. Any questions can be directed to Fijare Plous or Mrs. Adamczyk.

PREPARE NOW FOR THE SCHOOL-WIDE SAT

In October, students at HKHS took the PSAT which is one step in the process of preparing for the upcoming SAT. The 2019 school-day SAT will be administered on April 9. As another way to prepare for this test, SAT math review sessions have been offered during 1st lunch on Wednesdays in Mrs. Adamczyk's room (since February.) Prior to attending a review session, students are asked to complete one math section of a designated released College Board SAT. Any students interested in improving their SAT math score should swing by C213 to get some last minute review...better late than never!



M3 Math Challenge

At 7:00am on Sunday, March 3rd, ten dedicated HKHS juniors and seniors arrived at the school to participate in the 2019 M3 Mathworks Math Modeling Challenge. Through participation, students experience what it's like to work as a team to tackle a real-world problem under time and resource constraints, akin to those faced by professional mathematicians working in industry.

This year's challenge problem, "One is too many and a thousand is not enough: Substance Use and Abuse", prompted students to research how the financial and non-financial consequences of substance abuse ripple through society and affect more than just the user. Students were challenged to provide a mathematical model to help predict the spread of nicotine use due to vaping over the next 10-years, to analyze the numerous internal and external factors that contribute to substance abuse, and to develop an "impact of substance abuse" metric to help illustrate the influence of various substances on society.

By 9:00pm, both solution papers were submitted. Now...students wait, with fingers crossed, for the results of the review of their papers by the more than 125 PhD-level applied mathematicians who serve as judges

throughout three rounds of judging. If the team's submission is chosen as a winning solution paper, the team can earn up to \$20,000 in scholarship money...Go Cougars!

To read more about the M3 Math Challenge, and to see the full 2019 Challenge problem, please see the next two pages or visit <https://m3challenge.siam.org/>.

See photos from the day below.



M₃ MathWorks Math Modeling Challenge 2019

One is too many and a thousand not enough: Substance Use and Abuse

Substances such as tobacco, alcohol, and narcotics can affect the physical and mental health of users. The consequences of substance abuse, both financial (health care, the criminal justice system, workplace productivity, etc) and non-financial (divorce, domestic abuse, etc), ripple through society and affect more than

just the user. The effects of substance abuse on individuals and society have come to the forefront recently as opioid addiction has become prominent¹.

Efforts, such as taxes and regulations on cigarettes and the Drug Abuse Resistance Education program, have been made at the local, state, and national level to educate, control, and/or restrict the consumption of such substances. Such efforts need to start with an understanding of how substance abuse spreads and affects some individuals more than others.

1. Darth Vapor—Often containing high doses of nicotine, vaping (inhalation of an aerosol created by vaporizing a liquid) is hooking a new generation that might otherwise have chosen not to use tobacco products. Build a mathematical model that predicts the spread of nicotine use due to vaping over the next 10 years. Analyze how the growth of this new form of nicotine use compares to that of cigarettes.

2. Above or Under the Influence?—Like nicotine, the abuse of most substances is correlated with numerous internal and external factors that affect the likelihood of an individual becoming addicted. Create a model that simulates the likelihood that a given individual will use a given substance. Take into account social influence and characteristic traits (e.g., social circles, genetics, health issues, income level, and/or any other relevant factors) as well as characteristics of the drug itself. Demonstrate how your model works by predicting how many students among a class of 300 high school seniors with varying characteristics will use the following substances: nicotine, marijuana, alcohol, and unprescribed opioids.

3. Ripples—Develop a robust metric for the impact of substance use. Take into account both financial and non-financial factors, and use your metric to rank the substances mentioned in question #2.

Your submission should include a one-page executive summary with your findings, followed by your solution paper—for a maximum of 20 pages. If you choose to write code as part of your work to be eligible for the technical computing prize, please include it as an appendix. Cite your sources, including those in the provided data files if you use them. Any code appendix or reference page(s) will not count toward your 20-page limit.

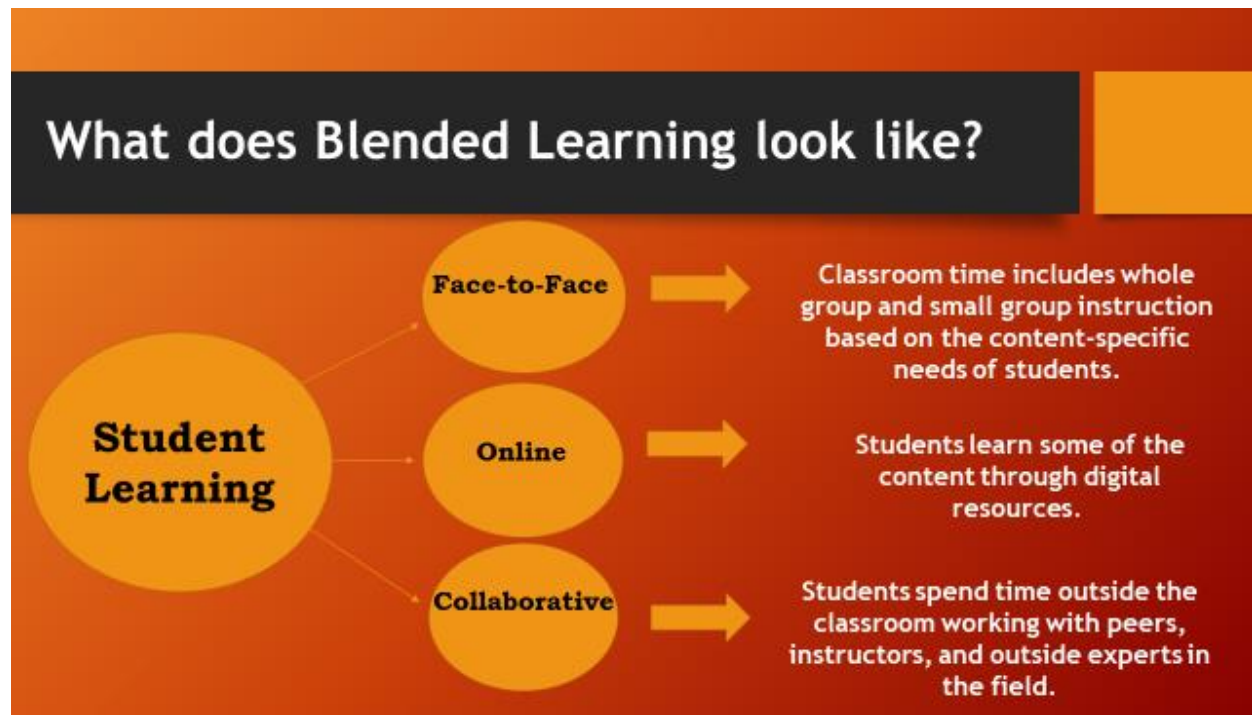
Organized by
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DATA STATEMENT

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Various organizations and agencies collect a data on a regular basis. A small amount of data has been compiled and provided. You are not required to use this data; that is, you may choose to use none, some, or all of this data and/or any additional data sources you may identify while working on this problem. Be sure to cite all resources used. The data files (names below) are linked from this page: <https://m3challenge.siam.org/node/439>.

- High_school_vaping_data
- NIH-DrugTrends-Data Sheet
- A figure is also provided for historical context of cigarette consumption

MATLAB Users: If you are trying to use this or any other spreadsheet data in MATLAB, you can import the data by doubleclicking the files in MATLAB's "Current Folder" browser or use the [Import Data Button](#) at the top of the Toolstrip. Watch this quick MATLAB [video tutorial](#) about importing spreadsheet data. See how the [MATLAB Import Tool](#) was used in a previous year's problem to import and analyze data.



HKHS Enjoys a New Instructional Model

This year, we have enjoyed piloting a new instructional model for some of our courses. Blended Learning is a mix of traditional in-class instruction, independent online learning by students, and collaborative learning among students and/or experts in the field. Mrs. Ritter has used this model for one of her U.S. History classes and Mrs. Zukowski has employed the model for her UCONN Horticulture class. In this first year, students and teachers have learned alongside each other as Google classroom has been introduced and as new and exciting instruction and assessment features are shared. For example, students often take their assessments online, getting immediate feedback and saving classtime for person-to-person discussion, labs, and other more meaningful activities. Students report enjoying more independence and teachers report the benefits of working more personally with smaller groups of students while other students are working online or with their peers. As news of the pilot success spreads, we have several other classes queued up to be taught in the blended model next year including: Physics; UCONN Environmental Science; Early Childhood Education Lab; and Select Choir. Students signing up for any of our blended learning experiences will receive additional information in the coming weeks.

HK Student Work Featured in Shoreline Arts Alliance Future Choices Art Show

Now in its 35th Year, Future Choices recognizes and celebrates the talent and passion of our region's high school students. Open to grades 9 through 12, this competition and exhibition are adjudicated by a panel of fine arts professionals.

Students whose work is selected will have their pieces displayed in a gallery show at the Sill House Gallery of the Lyme Academy College of Fine Arts for three weeks. Categories that are judged are Ceramics, Drawing, Mixed Media, Painting, Pastels, Photography, Prints, Sculpture, and Video. The exhibition is free and open to the public. High schools are recognized for their efforts in keeping the arts a vibrant part of the curriculum.

Students whose work was accepted and hung in the show include:

Emma Anziano	Becca Fisher	Zoe Smith
Hannah Averill	Kaitlin Hall	Sydni Therrien
Emily Bagnoli	Anna Mercier	Autumn Walton
Elena Boyington	Lauren Miller	Tessa Wills
Charli Cancroft	Mikayla Nuhn	Grace Yantosh
Autumn Coady	Malin Nystrom	Morgan Yazmer
Rebecca Conti	Julia Saglio	Briana Yepes
Melissa Danaher		

The following students were awarded a Congressional Certificate and a cash prize: **Ceramics** Third Place: Rebecca Conti

Drawing First Place: Anna Mercier



Prints

First Place: Tessa Wills

Second Place: Emily Bagnoli

Sculpture

Second Place: Zoe Smith





Hiroko Kaimoto, Jane Bell, and Ryan Klimaszewski from the Advanced Art Projects Class teamed up to paint the HK logo in the weight room.

Please remember to see the enclosures for important dates from our Guidance Department and for an upcoming fundraiser to benefit Project Graduation.

Thank you, as always, for your support of our students and our school.

Respectfully,

Donna L. Hayward



Gotsneakers? Fundraiser

To Benefit HK High School Project Graduation

Please donate unwanted, wearable sneakers (other shoes accepted also, but sneakers raise most funds.) This helps our planet by reducing used shoes going into landfills. We earn \$1 for every pair collected to help keep high school graduates safe on their graduation night! Sneakers are sent to help the more than 6 million people in the world who do not own shoes.

SCHOOL COUNSELING UPDATE – MARCH/APRIL 2019

Freshmen/Sophomores – Counselors met with Freshmen during advisory and discussed mindfulness and meditation. Freshmen/Sophomore Parent Night was held Monday, March 11, the school counselors discussed college and career planning. Counselors also discussed Naviance and registering parents who had not yet to registered. If you are not registered for Naviance contact your child's counselor.

Juniors – School counselors are currently meeting individually with each junior to discuss college planning. New this year we are inviting parents to join this meeting. If your child has not had their junior planning meeting, please contact Kati Farkas, Counseling Secretary at 860-554-5750 or by email kfarkas@rsd17.org to schedule your appointment.

Seniors – A reminder to seniors that you need 30 hours of community service to graduate. Please be sure to complete your community service forms (available in the counseling office) and return them to your school counselor.

The list of available scholarships/applications are posted in Naviance. Please be sure to complete the application and request a transcript from Mrs. Farkas in the counseling office at least one week prior to the deadline.

UPCOMING DATES TO REMEMBER:

Annual College Fair – The HKHS Annual College Fair will be held on Wednesday, April 24, 2019 from 10:00 – 11:30am in the HKHS Fieldhouse.

Awards Ceremony - May 20, 2019 – 6:00pm in the Auditorium

Senior Scholarship Ceremony - May 28, 2019 — 6:00pm – Auditorium