



JANUARY 2021

STEM NEWSLETTER

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MEET THE EDITORIAL TEAM:

Chair - Arusa Malik (11th)

9th - Eman Zia

10th - Lilly Fisher, Ke Shi , Jaylene Miranda, Autumn Rose Strawbridge, Natalie McDonald, Neel Garg

11th - Kira McGuire, Elizabeth Barker, Tina Shi, Megha Thomas, Anthony Morgan

- GENERAL BULLETIN -

ADOPT-A-FAMILY DONATION DRIVE Autumn Rose Strawbridge

During the month of December, all sorts of sports teams and clubs participated in Adopt A Family. Students, teachers, and parents donated all kinds of necessities from shirts and sweatshirts to gift cards that could be used for food. These items were dropped off at the school and then transported to the families who needed them. Now more than ever, it is important to reach out to the community, helping those who need a little extra support. Thank you to everyone who participated, just one donation makes a huge difference in someone's life!



Job Shadow Honors

Arusa Malik

Class of 2024 (Must complete 6 for the school year)

74 out of 109 freshmen have completed their Fall job shadows. 23 are done for the school year. 6 who have done MORE than the six required. Big congrats to the following STEM 9 students! Seven job shadows: Lopes, Cameron; Thuillier, Elizabeth; Wallace, Matthew; Zagalsky, Darin.

Eight job shadows: Carter, Joscelyn; Chopra, Anju

Class of 2023 (Must complete 4 for the school year)

72 out of 82 sophomores have met job shadow requirements for Fall semester ONE is done for the school year: Kevin Tagobert

Class of 2022 (Must complete 2 for the school year)

37 out of 92 juniors met job shadow requirements for Fall semester. 12 are done for the school year TWO exceeded requirements: Ian Abusamra and Tina Shi

Class of 2021 (Must complete 1 for the school year) 17 out of 91 seniors have completed job shadow requirements for the year

REMEMBER! Check your Class Google Classroom for more information about job shadows or visit the STEM job shadow website: <https://sites.google.com/aacps.org/virtual-job-shadows/home>

Don't forget to complete this reflection form when you complete a job shadow:

https://docs.google.com/forms/d/e/1FAIpQLSd-gq_jjH20tRjxuq7Sdf00td6n4TBJTiNaY5dyUqW1mAXKPg/viewform?gxids=7628

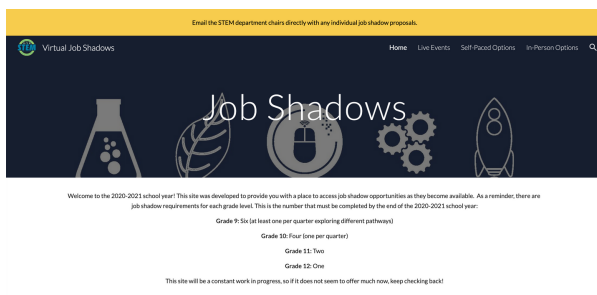


Project EHeroes

Ke Shi

In the beginning of the school year, many students decided to work on Project eHeroes for their teachers.

It has been a huge challenge for teachers to adapt to e-learning. They have put in countless hours during and after school in order to make the most of their time with students virtually. We would like to recognize all they have done during this challenging time. Students have created motivational posters or letters for their teachers to keep them going and have already dropped them off to South River High School. Many of the posters have already been distributed to the teachers. We hope to make them smile and because they deserve this!



NEW SCHEDULE

Lilly Fisher

Starting in the second week of January, high schools across the county adopted a new schedule provided by the board of education. This new schedule includes a “small group” time at the end of each class, in which students can receive help from their teachers or work on homework. The new schedule includes 3 FLEX blocks on Wednesdays, allowing students to attend clubs or visit teachers. Students have club time on Tuesday, Wednesday, Thursday, and Friday. They attend Advisory on Monday and Wednesday. See the new schedule at [https://www.aacps.org/site/handlers/filedownload.ashx?](https://www.aacps.org/site/handlers/filedownload.ashx?moduleinstanceid=29857&dataid=73715&FileName=UPDATEDSpring%2021%20High%20School%20Student%20VirtualHybrid%20Schedule.pdf)

[moduleinstanceid=29857&dataid=73715&FileName=UPDATEDSpring%2021%20High%20School%20Student%20VirtualHybrid%20Schedule.pdf](https://www.aacps.org/site/handlers/filedownload.ashx?moduleinstanceid=29857&dataid=73715&FileName=UPDATEDSpring%2021%20High%20School%20Student%20VirtualHybrid%20Schedule.pdf)



CHROMEBOOK DISTRIBUTION

Autumn Rose Strawbridge

As hybrid learning is approaching, it is still incredibly important for each student to have access to a chromebook. During hybrid learning each student will need to bring their chromebook to and from school. If you don't have a chromebook or need a different one, a quick email to your counselor is all it takes to obtain one. A list of counselor contact information can be found on the South River website here: https://www.southeriverhigh.org/apps/pages/index.jsp?uREC_ID=470443&type=d

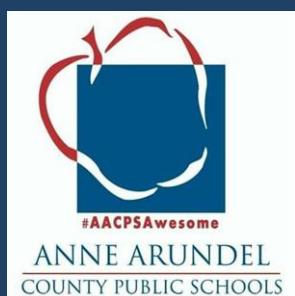
Anne Arundel County Public Schools | Spring 2021 Virtual/Hybrid School Day High School Student Schedule

On Monday, Tuesday, Thursday, and Friday, the school day for students is 8:30am-3:55pm. Lunch was from 12:00 to 12:30pm. On Wednesday, the school day is 8:30am-3:00pm. During instructional time, it is essential that teachers and students engage fully in learning. Learning is a collaborative process and teachers need to be able to see and interact with students to provide the best learning experience. In all green learning blocks, students and teachers are required to have their cameras on so the most high engagement and learning can take place. Note: All light green learning blocks are mandatory for student attendance. The darker green learning blocks are highly encouraged, but not mandatory. FLEX Learning Time on Wednesday, Student Group/Special Program Meeting/Clubs on Tuesday and Thursday, and Counselor Connection Clubs on Friday provide teacher facilitated learning support, learning extensions, college and career counseling, and club time. Teacher Office Hours/Connection Time is also available for drop-in teacher support/facilitating by appointment.

Daily Schedule	A-Day	B-Day	Support	A-Day	B-Day
	Monday	Tuesday		Thursday	Friday
8:30-9:20 AM	Period 1A	Period 1B	8:30-9:00 AM Student Wellness/ Community Meeting	Period 1A	Period 1B
9:20-9:40 AM	1A Small Group	1B Small Group	9:05-9:40 AM FLEX A: Clubs/CC/Content	1A Small Group	1B Small Group
9:50-10:40 AM (Wed: 8:30-11:00 AM) Morning Block Live Synchronous Teaching	Period 2A	Period 2B	9:45-10:20 AM FLEX B: Clubs/ Wellness/Content	Period 2A	Period 2B
10:40-11:00 AM	2A Small Group	2B Small Group	10:25-11:00 AM FLEX C: Clubs/CC/Content	2A Small Group	2B Small Group
11:05-11:30 AM	Student Wellness/ Community Meeting	Study Group (Tutorial)/ Special Program Meetings/Clubs	Virtual Learning ends for students at 11:00 am.	Study Group (Tutorial)/ Special Program Meetings/Clubs	Counselor Connections/Clubs
11:30-12:00 PM	Lunch	Lunch		Lunch	Lunch
12:00-12:50 PM	Teacher Office Hours/ Connection Time	Lunch		Lunch	Lunch
12:50-1:10 PM (Mon/Tues/Thurs/Fri, one)	Period 3A	Period 3B		Period 3A	Period 3B
1:10-2:00 PM	3A Small Group	3B Small Group		3A Small Group	3B Small Group
2:05-2:55 PM Afternoon Block Live Synchronous Teaching	Period 4A	Period 4B	2:30-3:00 PM Teacher Office Hours/ Connection Time	Period 4A	Period 4B
2:55-3:15 PM	4A Small Group	4B Small Group		4A Small Group	4B Small Group
3:15-4:00 PM				Teacher Office Hours/ Connection Time	

END OF SEMESTER 1 Tina Shi

The end of the first semester/second quarter is upon us! It is the time when classes wrap up. Students have worked hard all year long and it is important for students to continue to stay motivated in online learning. Students should improve their grades by turning all assignments in and communicating with their teachers when needed. We hope you finished the semester strong!



- 9TH GRADE BULLETIN -

PATHWAY NIGHT

Eman Zia

As we all know, one of the most important decisions for a STEM freshman here at South River is, what pathway they decide to take—whether it's Computer Science, Materials Science/Nanotechnology, Earth and Space Systems, Green Technologies, or PLTW. Luckily, 9th graders are able to come to Pathway Night to learn about the pathways they're interested in before they have to make a final choice. So, on February 11th, come one come all (partly because it's also required) to Pathway Night! There, you'll get the opportunity to explore your top 3 pathway picks, and talk to the coordinators that are in charge of those pathways. You can ask about any questions you have, learn about the opportunities available through the pathway, determine what classes you must take, etc. So mark your calendars—February 11th will be here soon.

LUNAR VIDEOS

Eman Zia

The Lunar Base Project... Yes, it's still ongoing. Not to worry, though, because we're getting close to a fun part—the WeVideo where we compile months of effort into a 5 minute video! Not convinced yet? That's alright, because when you actually get to making the video, and putting everything together with your teammates, you'll be able to experience the best part of the whole process: having a tangible product that you've created. The video will showcase your work throughout the journey, including the evolution of your base designs, the mission patches, your individual components, etc. Remember, this is a big part of your GCC grade, so get creative, and bring out your best work!

RUBE GOLDBERG

Eman Zia

In Systems Science A, freshmen were introduced to the Rube Goldberg Project this December, which also crosses over to Principles of Engineering. You may be familiar with Rube Goldberg—the cartoonist/engineer that designed elaborate machines to perform simple tasks. Well, through this project, students got to create their own Rube Goldberg machines! Recently, they put together their blueprints, machine prototypes, and the final runs all-together into a video, which showcased not only their work and knowledge, but also their determination and grit to keep tinkering with their machines until the outcome was perfect. So to everyone who kept at it, through the exasperating number of times you'd have to set up the machine over-and-over again, give yourself a pat on the back!

- 10TH GRADE BULLETIN -

PBL Project

Lilly Fisher

In their Project Based Learning Class, students have begun a project that will take them through the end of January, and can be continued on even later. Students work in groups of three to choose a problem that is mutually interesting. They then do background research to learn more about the problem and come up with innovative solutions. After doing a cost-benefit analysis about the solutions, they decide which solution would be best in solving the problem, and subsequently explain and develop the idea. Students in the past have continued their projects outside of school, and actually implemented their solutions in the real world!

JOB SHADOWS

Autumn Rose Strawbridge

Throughout the duration of the school year, job shadows have been in full swing. All STEM students must complete job shadows available during the quarters. This quarter, there was a wide range of opportunities for students, such as a Powerhawks presentation about women in the engineering field or the ACE mentor presentations that described all aspects of construction. This semester, students can look forward to engaging opportunities, ranging from an outside scavenger hunt with Dr. Rachel Valetta to NightSkies at Home where students can learn about astronomy right from their living rooms.

ENGLISH SPEECHES

Jaylene Miranda

The sophomores have been tasked with writing an argumentative speech on a topic of their choice. These topics are all based upon the students' own viewpoints on ideas that concern or apply to most teens. For example, some topics they have to choose from are; "Do AP classes benefit U.S students?", "Are online classes as beneficial as face to face instruction?", "Are current portrayals of teenagers on television appropriate?", etc. Thus far the students have finalized their decision on the topic that their speech will discuss. Currently the students have been conducting thorough research regarding their chosen topic. The development of their speeches is underway as the students are diving further into the composition of their argumentative writing.



OPTICS PROJECT

Ke Shi



Since the start of the second marking period, students have been working on their Unit 2 science project related to human visions. This project is divided into three parts. Early in the project, students can choose to either be exploring the three Gizmo activities or interacting with multiple simulations. In part two of the project, students will be discussing and exploring eye diseases, again using multiple simulators. Students also have the option to create a lens experiment using gelatin. For part three, the task is to design a 2-lens system to correct a vision problem and apply their newfound knowledge of light. By the end of this project students will be able to understand the properties of light, how humans perceive images, and problems that can be presented in human eyes.

- 11TH GRADE BULLETIN -

PSAT/NMSQT®

 CollegeBoard /  NATIONAL MERIT SCHOLARSHIP CORPORATION

PSAT NMSQT

Kira McGuire

In preparation for the SAT, junior students were given the opportunity to take the PSAT/NMSQT free of charge. Students were able to register through FamilyID and then show up at their home high school on January 26th to participate. Whether you took advantage of this free opportunity or not, be aware that AACPS plans to offer the SAT to juniors for free in the spring. Further information about the upcoming SAT will be released as we get closer to the end of the school year.

INTERNSHIP RESUME NIGHT

Arusa Malik

From 12:00 PM to 12:50 PM there will be a mandatory resume cover letter session with Ms. Catan. This workshop is for all STEM juniors. The workshop will cover how students can create an effective and persuasive cover letter that compliments their resume nicely. This will help juniors who are searching for internships. Please save the date, February 9th, for this event. More information will be shared through the STEM Class of 2022 Google Classroom and email. If you have any questions please email hcatan@aacps.org

COMMUNITY CHALLENGE NIGHT

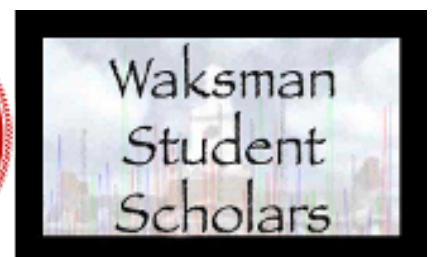
Arusa Malik

On January 21st, half of the STEM juniors at South River attended Community Challenge night. The night started at 6:45 with a hopeful introduction given by Mr. Tim Johnson and ended at almost 8:30. Groups of students (from STEM at North County/South River and BMAH at Glen Burnie) were tasked with solving a problem that a local business or organization faced. This could include making free school meals open to more families, designing a website to educate students about cybersecurity, or even developing a solution for underrepresented clubs and organizations. Students spent all of first semester on these projects, and they finally had a chance to present their products during challenge night.

GREEN TECHNOLOGY CLONE ANALYSIS

Megha Thomas

Students from the Green Technologies pathway have been working hard to finish analyzing their practice clones as a part of the molecular biology and genomic research project for their pathway. Following the correct analysis of their practice clones, they will work to analyze a clone of their own. Second semester, their work will be used to create an informative poster and a research paper that will be published in the National Institutes of Health.



- 12TH GRADE BULLETIN -

CAPSTONE HONORS

Congratulations to the STEM and Project Lead the Way seniors whose capstone projects were chosen by the Fort Meade Alliance to receive a STEMOVATION grant! Each of these groups have received either funding or mentorship as they work to showcase their final projects in May.

Electro-Sensor Glove: Evan Kircher and Alexander Theodorakos (STEM BMAH)

Demographic Repeat of Scam-Victims: Liam DeCoursey and Matthew Wynne

Remediating Urban Soil Pollution: Lily Baker, Anagha Chundury and Kelsey Racette

Disposable Mask Waste: Cole Hazard, Joseph Ort, Robert Riley

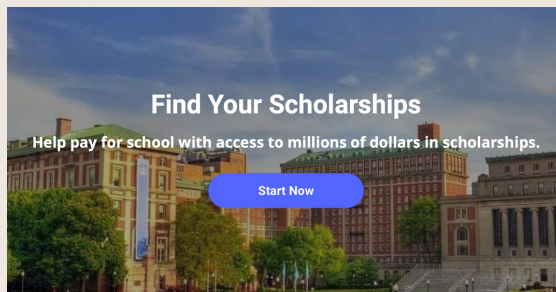
SRHS Path Planners: Abby Neff, Amanda Parmele, Matthew Speciale

We are so proud of you all!

SCHOLARSHIP RESOURCES

Some scholarships for college are merit-based. You can earn them by meeting or exceeding certain standards set by the scholarship-giver. Merit scholarships might be awarded based on academic achievement or based on a combination of academics and a special talent, trait, or interest. Other scholarships are based on financial need. Many scholarships are geared toward particular groups of people; for instance, there are scholarships for women or graduate students. And some are available because of where you or your parents work, or because you come from a certain background (for instance, there are scholarships for military families). A scholarship might cover the entire cost of your tuition, or it might be a one-time award of a few hundred dollars. Either way, it's worth applying for because it'll help reduce the cost of your education. Here are some helpful websites:

[Fastweb.com](https://www.fastweb.com)
[Moolahspot.com](https://www.moolahspot.com)
[SallieMae.com](https://www.salliemae.com)
[Cappex.com](https://www.cappex.com)
[Petersons.com](https://www.petersons.com)

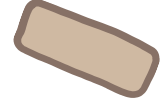




JANUARY STEM TEACHER SPOTLIGHT



MRS. SMITH



WHAT IS YOUR PROFESSIONAL BACKGROUND?

This is my 14th year of teaching High School Math. After graduating from Miami University (Ohio), I started my teaching career in Nashville, TN. I taught AP Statistics and IB Math Studies for 5 years before moving to Texas due to my husband's pilot training with the USAF. While in Texas, I worked with a local mathematics tutoring agency to increase state mandated math scores for struggling high school students in the area. In 2012 my family relocated to Louisville, KY and I began teaching Algebra II and statistical analysis. In 2014 we moved to Annapolis, MD and I began teaching at South River High. In 2017, I began teaching Honors Pre-Calculus and AP Statistics to the STEM 10th grade cohort. Besides the privilege of working in the STEM program, I am honored to be the Wellness Club sponsor at South River High school.

WHAT MOTIVATES YOU?

My love for learning and student growth are my motivation. It is one of my life's pleasures to accompany students on their journey through high school. I love watching students grow from their sophomore to their senior year. I am motivated by student's who are dedicated to their studies and the desire to not only better themselves but also the world around them.

WHAT IS THE BEST THING ABOUT STEM AT SOUTH RIVER?

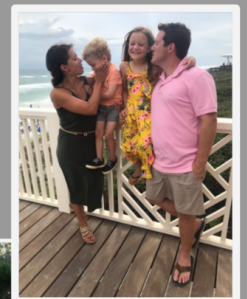
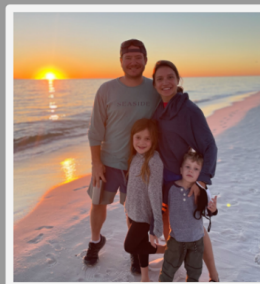
The STEM program at SR is more than just grades in a gradebook. It is a program dedicated to cultivating thoughtful and creative problem solvers. The program is designed to help students discover their interests and passions. Then students are given opportunities to deepen their understanding and execute problem solving strategies. Every year I am in awe of the work our students are doing and their commitment to change the world. The STEM students inspire me to be a better teacher and a better human.

WHAT IS YOUR FAVORITE IN-SCHOOL MEMORY?

It cannot say that I have one favorite in-school memory. But every start of the school year I look forward to students from previous years stopping by my classroom and saying hello. I can tell by the smiles on their face that the time spent in my class wasn't just about math lessons. Their smiles, their "hello", their "I miss your class" remind me that we learned life lessons and cultivated joy inside the math classroom. In e-learning students have continued to help me remember this joy by sending emails or special videos.

WHAT IS YOUR MOST LISTENED TO COMMUTING TO SCHOOL SONG THIS YEAR?

My commute to work involves walking down a flight of stairs, but Taylor Swift's Folklore album has been on repeat in my house and in my head. The song 'Exile' with Bon Iver is fire.



OPPORTUNITIES

Struggling in chemistry? Come to Chemathon to receive tutoring from juniors! Tutoring sessions will be every Wednesday, B block, from 9:45am - 10:20am. Fill out this Google Form to sign up: <https://forms.gle/Cabw5Tn4w63fyK8F9> For further questions, please email Mrs. Nulud at enulud@aacps.org.



Want to support a good cause and eat good food? Key Club is hosting a Chipotle fundraiser night to support the Leukemia and Lymphoma Society. This event will take place at the Chipotle location on Solomons Island Rd in Edgewater. All you have to do is stop by February 10th from 4pm - 8pm and say that you are there to support the South River Key Club at checkout. If you order online, use the code: W48LGWA instead. Every order supports LLS' fight against blood cancer!

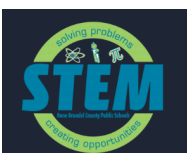


STEM After Hours: It's a fact that online school can be stressful. If you find yourself falling behind in class, feeling overwhelmed, or simply having no motivation, then STEM After Hours may be the place for you. You'll find several upperclassmen and teachers who can help provide the resources you need to get that one geometry assignment completed, or verify that Systems Science grade. Want to sign up? Join the google classroom with code xtvsbj. Meetings are Mondays through Thursdays from 4 to 5 pm.

NOTE FROM THE CHAIR

Hello everyone! Thank you so much for reading the STEM newsletter. The Editorial Team has been hard at work writing and editing this month's edition. On the behalf of the Newsletter Team and STEM Family Committee we wish you a very happy new year! Hopefully 2021 brings some positivity for all of us. Thank you again for reading, we are so excited to share next month's edition with you! If you have any comments please don't hesitate to email me at: to.arusa.malik@gmail.com

Respectfully, Arusa Malik



ADDITIONAL RESOURCES

Free hot lunch pick up:

<https://www.aacps.org/mealpickup>

Find a school counselor:

<https://www.aacps.org/site/Default.aspx?PageID=862>

COVID-19 Information:

<https://www.aacps.org/coronavirus>

Incident report form:

<https://secure.aacps.org/webapps/SEFP/OSOS>

Anne Arundel County Crisis Response System
Warmline 410-768-5522

The Maryland Youth Hotline 1-800-422-0009

Student Safety Hotline 1-877-676-9854

COMMUNITY WARMLINE

Crisis Response System

410-768-5522
24 HOURS A DAY,
7 DAYS A WEEK

For Anne Arundel County Residents
in crisis. Get assistance and
resources within the community.

**Reminder to all: You are
not alone in your
hardships! Please reach
out if you need it.**

CRISIS TEXT LINE |

Text HELLO to 741741
Free, 24/7, Confidential



A suicide prevention network of
161 crisis centers that provides a
24/7, toll-free hotline available to
anyone in suicidal crisis or
emotional distress.