



FEBRUARY 2021

STEM NEWSLETTER

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9th - Eman Zia

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

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- GENERAL BULLETIN -

PROJECT E-HEROES VIDEO

Lilly Fisher

Project eHeroes aimed to thank teachers for the hours of extra work they put into making virtual learning as effective and engaging as possible. Students made posters for their eHero teachers at home; they were delivered to teachers through the STEM office. Thank you teachers, and thank you students for taking the time to appreciate the effort teachers have put into virtual learning. See the video here:

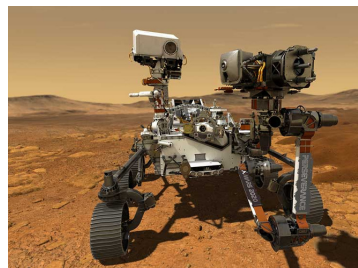
<https://www.youtube.com/watchv=HAzEzyG6Ofc&feature=youtu.be>



NASA PERSEVERANCE WATCH PARTY

Arusa Malik

On February 18th, NASA's Perseverance rover successfully landed on Mars. This landing was a huge achievement for mankind because it is one of the first steps in NASA's "Mars 2020" mission. The rover is carrying the helicopter Ingenuity, an experimental aircraft that will attempt the first powered flight on another planet. The Perseverance rover is designed to study the rock record of Mars to reveal more about the geologic processes that created and modified the Martian crust and surface over time. The landing occurred at approximately 3:30 PM. Students from South River were invited to a virtual rover watch party. At one point, there were over 200 students in the virtual watch party. They were able to see the rover land, background footage from NASA mission control, and words from a special guest. Dr. Michelle Thaller, an astronomer and science communicator for NASA, took time out of her day to commentate some of the landing and answer students' questions. Overall, the event was a huge success. Thank you to all the teachers who helped facilitate this opportunity. A recording of the event will be shared with students soon.



**USE THIS LINK TO WATCH THE LANDING:
[HTTPS://WWW.NASA.GOV/PERSEVERANCE](https://www.nasa.gov/perseverance)**

FBLA COMPETITION

Jaylene Miranda

Future Business Leaders of America, better known as FBLA, took part in several regional competitions. 44 of South River's students won at the regional level!

In addition to these victories, two STEM students won the business achievement awards.

South River's great performance at regionals means South River FBLA will be moving on to compete in statewide competitions.



FALL ATHLETICS

Arusa Malik

The Board of Education has approved fall, winter, and spring sports practices for the rest of the school year.

Beginning February 16th, students had the opportunity to engage in fall sports. The season will run from February 16th to April 17th. To view the full fall athletics plan please see this document:

https://southriverathletics.org/library/files/southriverathletics_86/files/NEW%20Fall%20Sports%20Plan.docx

VALENTINES DAY

Tina Shi

Valentine's day is also called Saint Valentine's Day or the Feast of Saint Valentine. It is the celebration of love. This day was established to honor Saint Valentine of Rome. On Valentine's Day, people give cards, letters, and candies to their loved ones. Common symbols of Valentine's Day include hearts and red roses. Valentine's Day is an old tradition that originated from a Roman festival and continues today as a special holiday.



COURSE SELECTION

Tina Shi

It's that time of the year again when students have to think about their course selection for their next school year. Normally, students would log on to PowerSchool to select their courses.

However, it is different for STEM students. STEM students should review course options and complete a google form that will make the scheduling process quicker when meeting with Mr. Brainer and Ms. Canevazzi individually during the weeks of February and March.

PRESIDENT'S DAY

Lilly Fisher

Presidents' Day is a federal holiday celebrated every year on the third Monday in February. In 2021 it will occur on Monday, February 15. Originally established in 1885 in recognition of President George Washington, the holiday became popularly known as Presidents' Day after its date was moved as part of the Uniform Monday Holiday Act in 1971. Presidents' Day is now viewed as a day to celebrate all U.S. presidents, past and present.

TSA COMPETITION

Jaylene Miranda

The Technology Student Association will be participating in several competitions which will take place within the first two weeks of March (March 1st - March 14th). Some of the competitions taking place will be virtual, while other competitions require participant submissions to be turned in. Also, we would like to acknowledge several of our students who are taking the step to run for the state TSA office.



JOB SHADOWS

Ke Shi

This year's Job Shadowing for STEM students is held virtually due to the pandemic. Students have the opportunity to participate in Live Events, Self-Paced Options, or In-Person Options. New events will also be added to the website when they arrive. Many of those events require registration ahead of time and we hope that students will choose the events that they are interested in. STEM students have a different number of Job Shadow requirements that they will need to complete by the end of the school year, depending on their grade level. For more information regarding Job Shadowing events, check out the website: <https://sites.google.com/aacps.org/virtual-job-shadows/home>

Hybrid Reopening Autumn Rose Strawbridge

Hybrid learning is set to start this March. High school students who chose to participate in hybrid learning will return to a school setting in two waves. Starting March 8th, all ninth and twelfth graders will return to in person classes, followed by tenth and eleventh grade on March 22nd. Those who ride the bus will be required to sit one per seat unless they are related and wear a face mask at all times. Hybrid students will participate in two days of in-person schooling and three days of eLearning. Students will be broken into two groups, the first attending school on Monday & Tuesday, and the second attending Thursday & Friday.

All students will continue to learn virtually on Wednesday. Participating students will be required to bring a charged chromebook and headphones to and from school each day. If you still need chromebook, make sure to email your guidance counselor to obtain one. Teachers, students and administrators will be following strict safety protocols, including limited class sizes, wearing a mask, social distancing at least 6ft away from classmates, and consistent cleaning of the building. To view the full reopening plan, visit:

<https://www.aacps.org/Page/9199>.

PICK UP SEMESTER TWO MATERIALS

Kira McGuire

With the beginning of the new semester comes new classes and new textbooks. Materials were distributed to all students on February 17th in the cafeteria. Included in these materials were brand new STEM kits; these are engineering-based activity boxes for all STEM students in grades 9-12. If students were not able to pick up materials on February 17th they must call the school at (410) 956-5600 to reserve a new pick-up time slot.



- 9TH GRADE BULLETIN -

MENTOR/MENTEE EVENT

Megha Thomas

After much planning by the STEM Advisory Board, the mentor mentee program has been transformed into a once a month program for freshmen and juniors to meet and talk about STEM topics. Every meeting, there will be a board member, a few junior mentors, and all their mentees in a Google Meet to discuss things like Pathway Night and future classes. Meetings are mandatory for all freshmen and the juniors who signed up to mentor. Please send any questions to the STEM Advisory Board: stem.advisoryboard.2021@gmail.com



SCIENCE FAIR

Eman Zia

It's that time of the year again: Science Fair! The opportunity to delve deeper into something that might have fascinated you—and present your findings. You can go one of two ways: an experimental or engineering route. However, this year's project might be a bit different from the past ones: You'll start the project in Ms. Nulud's class, work on it during the summer, and then finish it up in Ms. Chen's class sophomore year. For now, it's best to work on figuring out what you want to research, which, as we all know, is one of the hardest parts of the project.

Extreme Habitat Project

Eman Zia

In the beginning of this month, students were introduced to a new project for Systems Science A: The Non-Traditional Environment/Extreme Habitat project. This group project entails a lot of research and designing that will come together into a presentation, advertising a home in an unlikely location—like deep space or the Himalayas. What makes this project different is that it won't be completed consecutively, instead, there will be portions assigned as connected lessons to what is taught in class..



- 10TH GRADE BULLETIN -

AP HUMAN GEOGRAPHY PROJECT

Ke Shi

In AP Human Geography, students have been doing research on agricultural systems that were assigned to them. Students work in groups and research the connection between physical geography and agricultural practices, the hearth of the type of agriculture they are assigned to, how it diffused globally, the change in food production, and what impacts and influences it. They will also create three multiple-choice questions that can be answered by the students that are related to their agricultural system. By the end of this project, students will be able to understand the type of agricultural system they are researching and put together a short presentation about it.

PBL COLLEGE PREPAREDNESS UNIT

Ke Shi

In PBL, students worked on a copy of their resume. This is one of the first components of the College Preparedness unit. Students will continue to work on this unit for the next nine weeks where they will be doing college research. This will include research on college requirements in order to find out what colleges are the best for them. College Board is a great resource to use when first starting college research. It gives plenty of useful information about different colleges and allows students to find the perfect matches when they choose their criteria. College Board also sends both SAT and AP scores to colleges. Naviance is another great resource that students will be using. It is important for students to start thinking about their college research in order to prepare themselves for the future!



AP[®] Human
Geography



- 11TH GRADE BULLETIN -

“GETTING HIRED!” WORKSHOPS

Kira McGuire

AACPS Signatures Presents “Getting Hired!”, four virtual workshops to help you build your professional presence. These workshops are being led by community business partners. The first workshop is Skills Assessment; this workshop is February 23rd at 11:05am or February 24th at 11:05am. It is designed to help students identify their skills and promote them in a way that will showcase their value in the job market. The second workshop is Resume Writing; this workshop is February 25th at 11:05am or February 26th at 11:05am. Community leaders will help students phrase, format, and perfect their resumes. The third workshop is Getting the Interview; this workshop is March 2nd at 11:05am or March 3rd at 11:05am. Local experts will help students identify job boards, find openings in their area, and how to write an intriguing cover letter. The final workshop is Interview Tips; this workshop is March 4th at 11:05am or March 5th at 11:05am. In this workshop students will discuss the do’s and don’ts of in-person and virtual interviews. All four of these workshops are highly beneficial to juniors preparing for internships and the job market.

PORTAL SESSION FOR INTERNSHIPS

Arusa Malik

On March 3rd from 11:15 to 11:45 there will be a mandatory internship portal session for all STEM juniors. Ms. Catan will show STEM juniors how to create a profile and log into the AACPS Student Internship Portal. Students will learn how to upload their resume, browse portal internship opportunities, and apply to those of interest.

MGBR ORPHAN CLONES

Arusa Malik

Juniors in the Green Technology pathway have been hard at work with their practice cDNA orphan clones. Students are getting close to the end of their analysis, as many students are submitting their findings to the National Center for Biotechnology information. Now, they will begin researching and gathering information for their poster, which will be presented to professors from Rutgers University and Johns Hopkins University. Students will hear back about the publication of their clone soon.

RESUME / COVER LETTER WORKSHOP

Tina Shi

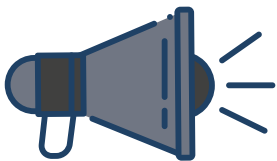
The Resume/Cover letter workshop was held for all STEM Juniors on February 3rd via a Google Meet. STEM Juniors learned about what an effective resume and cover letter should be like. Resources were also provided for students in order for them to write the best resume and cover letters. They will be required to upload their updated resume and cover letter in Google Classroom. They need both ready before the Portal Session in early March. Email Ms. Catan at hcatan@aacps.org if you have any questions.

- 12TH GRADE BULLETIN -

STEM SUCCESS STORY

Megha Thomas

Lily Baker is a STEM senior in the Green Technologies pathway. She is currently in the modern biotechnologies capstone class where she and her group are studying mycormediation, the use of fungi to treat water/air pollution. One of her most successful projects in the Green Tech pathway include the Urban Walls community project she did to increase environmental literacy for kids in Brazil. While it is currently on hiatus due to the Covid-19 pandemic, she hopes that future Green Tech students can continue on with the project. In the 11th grade Green Tech pathway requirement class, Environment in Society, she also had the opportunity to perform a DNA clone analysis experiment and her analysis is now published in the NIH GenBank database. Each of the projects she worked on in the Green Tech pathway were things she put on her resumes for colleges and internships. She will be majoring in Medicine, Health, and Society and Gender and Sexuality Studies next year at Vanderbilt University on a pre-med track. Lily hopes to pursue a career in genetics to identify the genetic markers of different inherited diseases. We wish her the best of luck with her STEM journey!



ATTENTION SENIORS!

Congrats! You are almost done with your high school journey. Many of you will be attending college next year. Here are some helpful financial aid resources you may want to take a look at!

- the financial aid office at a college or career school
- a high school or TRIO counselor
- the U.S. Department of Labor's FREE scholarship search tool
- federal agencies
- your state grant agency
- your library's reference section
- foundations, religious or community organizations, local businesses, or civic groups
- organizations (including professional associations) related to your field of interest
- ethnicity-based organizations
- your employer or your parents' employers

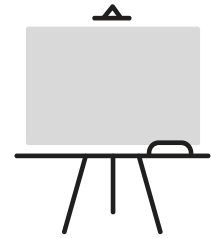


FEBRUARY STEM TEACHER

SPOTLIGHT



MR. SCHRADER



Professional background?

Well, if I tell you I've been teaching for 25 years that would make me sound pretty old...I guess the shoe fits. I taught 5th grade (in Ohio) my first year; nope. I then tried middle school; nope. Finally, I got certified to teach high school math. I started teaching math at Southern High School in 1998. I taught pretty much everything but Calculus but my favorite class to teach was knuckle head Algebra 1. I loved getting "difficult" kids to like math. I have been teaching Community Challenge and Capstone in the STEM program for 6 years. I think my flexible laid-back personality makes me a good fit for project-based learning.

What motivates you?

I'm motivated by doing stuff. I like to learn how to do things (that others pay for) and do it myself. I'm not sure if it's the saving money thing that motivates me or the accomplishment...probably both.

Best thing about STEM at SR?

The best thing about STEM is seeing the students mature from 9th to 12th grade. I'm continually blown away by what our students accomplish.

What is your most listened to commuting to school song this year?

I don't really have a most listened to song but I'm really into the Apple playlists "Back Porch Country." And "90's Alternative Essentials."

What is your favorite in-school memory?

I'm not proud of this one but it's my favorite; I was rushing to get the Capstone posters hung up (for Capstone night) a couple years ago. One of the posters got ripped in the process. The girls that made the poster were going to be so upset (they worked really hard.) With only a few minutes to spare, I ran to the Tech-ed department and begged Mr. Cohen to let me use their poster printer. He said, "just one- we don't have a lot of ink." So, I printed it and it looked amazing. (here comes the not proud part) When I was concentrating to trim the edges straight, a giant puddle of drool plopped out of my mouth and ruined the poster. Unfortunately, the slobber poster got displayed at Capstone night. The girls had to stand in front of the drool stain to hide it.

OPPORTUNITIES

SMOB: Anne Arundel County's student member on the Board of Education (SMOB) is the only one in the nation who sits on a local board with full voting rights. The SMOB is elected by members of the Chesapeake Regional Association of Student Councils (CRASC) and appointed by the Governor on July 1. The nomination process begins in February of each year and concludes with an election in April. Use this link to learn more:

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



Environmental Service: There is a great new service opportunity available for students interested in the environment or protecting our ecosystems. Available through the AACPS service learning portal and South River Environmental Club, students are working with Zooniverse to help collect data about coastal ecosystems. In this ongoing project held by the Smithsonian Environmental Research Center, students will virtually identify marine species invertebrates, increasing our ability to spot invasive species and protect coastal waters. This project is credible for service hours. To log your hours make sure to go to serveaacps.org and look for the project "Citizen Science: Invader ID". To find out more on how to get involved in this project visit <https://www.zooniverse.org/projects/serc/invader-id>.

CLUB SPOTLIGHT

Lilly Fisher

Wounded Warrior club was founded 3 years ago at South River and is based off of the Wounded Warrior Project.

Wounded Warrior works to help support and raise awareness for veterans through donations from fundraisers, thank you cards, and charity events. Some past events include a fundraiser 5K, Toys for Tots, letters to veterans and current military members, and a fundraiser for Veterans Hospitals. Through Wounded Warrior, you get the chance to help support veterans who fought for our freedoms, and to show your appreciation for veterans and their sacrifices. You can also get NHS merits from our various activities.

Wounded Warrior meets on Fridays in the club block.

Google Class Code: i7h67ha

MEDITATION GUIDE

Lilly Fisher

The pandemic has changed all of our lives drastically, creating new challenges that can be stressful and overwhelming. Actions such as social distancing, which help reduce the spread of COVID-19, can lead to isolation and loneliness, increasing our feelings of anxiety. Meditation is one strategy that is useful in lowering stress, improving focus, and reducing brain chatter. Even if it's just for 5 minutes, meditating every day can have incredible benefits.

How to meditate:

- 1) Sit in a comfortable place.
- 2) Make sure you are stable and in a position you can stay in for a while.
- 3) Feel your breath. Follow the sensation of your breath as it goes in and out.
- 4) Notice when your mind has wandered. When you notice that your mind has wandered, return your attention to your breathing.
- 5) Be kind to your mind. Don't obsess over the contents of the thoughts you stray to, just return to breathing.
- 6) When you're ready, open your eyes. Notice any sounds in the environment, notice how your body feels, and notice your thoughts and emotions.

That's it! Remember to be kind to yourself, and to be present in the moment when meditating.

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.