QUARTER 2 STEM SPOTLIGHT

Principal's Perspective:

Determined! As we closed out the second quarter, I can without question say that both our students and teachers were determined to "finish strong," and indeed they did! SMBR teachers and staff were committed to our small group and intervention sessions on Wednesdays, while our students who experienced challenges used the grade extension time wisely. The ultimate goal is always student achievement, and I was happy to see the determination of both our teachers, students AND parents in ensuring that we did our best to support student success, as we ended the second quarter. I believe that we have all now found our rhythm, as we work together, in being STEMmersed; resulting in the best STEM Scholars that our students can be!

Please enjoy our 2nd quarter newsletter, as it will highlight our many successes, during not only the last nine weeks but for the entire first semester. I am especially proud of the relationships that we had the opportunity to not only create, but to nurture during the 2nd quarter. Our STEM Service Committee, led by Ms. Davis working in partnership with our Reynoldsburg community, held a successful Toy for Tots "donation drive-thru," that raised over \$1,000 for our Reynoldsburg community. Kudos to our STEM Service teachers and staff and thanks to all of you who supported such a purposeful endeavor. We could not have done it, without you!

The winter break season also allowed us to form partnerships with local Divine 9 organizations (historically black sororities/fraternities) and the local chapter of Jack and Jill of America, Inc., whom graciously adopted 10 of our families over the winter break, providing them with a little extra, much needed TLC. We look forward to the continued building of new relationships, as well as nurturing our current partnerships.

Our first SMBR Parent University was held during the 2nd quarter as well! Parent University was an informative, virtual evening where our parents rotated between the following workshops:

- iMake it: STEM at Home Get Fit with your Family!
- Monitoring Student Progress An overview for parents, on how to navigate Power School, Playlists and Landing pages.
- Connecting Families and School and Staff An overview of our
- communication sites school web page and social media).
- Supporting Social Emotional Health in a Virtual Space Recognizing the signs of depression and mental health support.
- Ms. George and the Parent University committee did an excellent job and I am encouraging our families to be on the lookout for our 3rd quarter Parent University. You won't want to miss it!

Our new PBIS initiative was successfully kicked off during our 2nd quarter! All of our STEM Scholars who had displayed STEM Scholarship, received a certificate as well as having their name thrown in the STEM Pool, with a chance to win a Door Dash gift card! Five deserving students won a \$15 door dash gift card, compliments of our SMBR PTO! Thanks goes out to our PTO President, Ms. Harmacek and the amazing executive board for supporting our PBIS program and rewarding our students! We are looking forward to rewarding more of our STEM Scholars, at the end of the 3rd quarter.

STEM Kit pick-up days became a part of our new normal, 2nd quarter! These kits allow our virtual students to participate in hands-on learning, as we continue to offer the highest quality of instruction for our STEM Scholars. Be sure to check the calendar on our web page, for upcoming 3rd quarter STEM kit pick-up days.

First semester also brought the introduction of our School Wide Book Reads! I am excited to see the culminating projects; the tiny houses and windmills, just to name a few! Parents can expect to receive notification in the coming weeks regarding the second semester school wide books.

This week kicks off our signature school fundraiser: The Double Good Popcorn sale! It lasts for only four days, so be sure to get your order placed! The fundraiser is super safe, in that it is all online and the popcorn is delivered directly to your home, from Double Good. Did I mention that the popcorn is DELICIOUS? The popcorn is delicious!

Happy Black History Month! Although lesson planning inclusive of culture and diversity is a priority for SMBR, your SMBR teachers will be enriching their lesson plans this month with Black History, in honor of Black History Month. This will culminate in virtual tour of projects and essays, that will line our halls. Stay tuned! Weekly, students will have the opportunity to participate in trivia questions for prizes! AP Ross is presently collaborating with one of neighboring schools, in the planning of a fabulous program! More information will be forwarded to students and families, as the program is solidified.

One final word about our return to hybrid...please review with your students not only District but SMBR policies, in regard to dress code and cell phones. As I am sure that your students will tell you, we hold STEM Scholarship in the highest regard, and expect the best from our STEM Scholars! We appreciate your continued support on this.

Yours in Education,

Principal Wilson



Black History Month Recognizing Innovators In STEM Who Have Defined Our Modern World

Our virtual school-wide Black History Month Program will be held on Wednesday, February 24th in collaboration with French Run Elementary School. There will be no small group instruction this day. Stay tuned to our school web page for more information.

Tuesday, March 2 and Thursday, March 4 are the dates for our Black History Month Gallery Walk. All hybrid students will have the opportunity to walk the school and view the Black History Month assignments posted throughout the building. We will have a recorded version of the Gallery Walk available for our remote students.



Learn about some stem innovators



Dr. Euphemia Lofton Hayes (1890-1980): First African American women to earn a PhD in mathematics. She was an educator, activist for desegregation of schools, and member of the Association of the Advancement of Science.

Dr. Patricia Bath (1942-2019): An ophthalmologist, who developed laser technology to treat cataracts, and is the first women to chair an ophthalmology residency program in the U.S.





Guion Bluford (1942-): An engineer, retired U.S. Air Force officer and fighter pilot, and he was the first African American to go to space on the Challenger's eighth mission in 1983.





What an amazing Quarter 2 in the Fifth Grade! In Advisory, we learned about compassion and kindness, and about students' different needs. We spent some time with Ms. Artis and Ms. Rahe, our counselors, and heard about an exciting opportunity - we are going to help create a Zen Den for our students at Baldwin! And we are going to use what we learned this quarter to help us. Our book read for the semester, The Stars Beneath Our Feet, inspired us to design a place for others when they need a spot to "just chill out" and have some space. In our Math classes, fifth grade students used what we learned about volume of rectangular prisms to create a blueprint of our very own city. We also used a virtual Lego program to build that city and bring it to life! We had a lot of fun using MecaBricks to build our cities; it was a little challenging but it was fun! This really tied into our semester book read, where the main character, Lolly, uses Legos to help him cope with a difficult life at home. It also will help us as we begin to design our Zen Den.

Mrs. Heath's Math class submitted our favorite recipe that required fractions as measurements for the ingredients and we created a cookbook. The students were challenged to make their own recipe along with two other submitted recipes. We then had to determine how much they would need for each ingredient if they made it for six students in the class.

Humanities classes continued working with the Theme parks we mapped out to show mastery of geographers' tools. We also used the design cycle to plan, write, improve and share stories to take place in them! To fit with 2nd Quarter Technology focus, some students even made digital trailers of their stories! In addition to writing stories, we also spent some time discussing economics, working with concepts like scarcity and opportunity cost. We wrapped up this last quarter with a short project in which students used figurative language to create an advertisement for a product of their design or their choice! For this advertisement students also had a variety of technological choices to use to persuade their audience to purchase their product!

In Science, it was all about light and sound! Our students had a choice to create different projects, such as musical instruments, concert halls, periscopes, and spectroscopes to demonstrate our knowledge. We are going to use the information we learned to help us design Baldwin's Zen Den. �



Sixth Grade:

During second quarter, we completed our first grade-level book read with The House That Lou Built. We had the opportunity to not only learn about the young, ambitious, tiny house building Lou, but we also were able to learn about the Filipino culture this character comes from! After our sixth grade students read about Lou's design for her house, we began work on our own tiny house models. Using resources from humanities about 3D printed homes and architecture as a career, and resources from science about energy efficient homes, the students were able to create their own online designs for a tiny house with energy efficient choices. Not only did they have to think about the logistics of their design, but our sixth graders also had to calculate how they could budget for the materials to build and decorate their houses using decimal operations in math. They brought their designs to life building scale models with cardboard, plastic, legos, or any other materials they could think to use.



In Advisory, in addition to our work with our grade-level book read, we also studied important figures in STEM, such as <u>Ada Lovelace</u>. Ada is thought to be one of the very first computer programmers. We also started a discussion of what Ada's contribution meant for women in STEM! *****



Some sixth grade humanities students were given the book Juna's Jar and then had to complete their choice of different STEAM challenges to do based on the book.

Modesty Ojuekanmi wrote and illustrated a possible "next scene" for the book:



Oliver Stecker cooked Kimchi from scratch which begins the main character's journey:



Abigail Sorenson used technology to create a habitat for the creatures in the book:

Seventh Grade:

Design Challenge in Science

During second quarter, seventh grade students continued to study energy and specifically looked at the conservation of energy and renewable energy sources. As a culminating project, students went through the design cycle on their wind turbine projects. We kicked off the project by reading and watching "The Boy Who Harnessed the Wind", which is a true story in which a boy, William, builds a windmill for his struggling community by using recycled materials from the junkvard. Students worked in groups to conduct research on different renewable energy sources in addition to analyzing the energy consumption and production in the United States and Reynoldsburg. The final part of the project, students built a wind turbine using recycled materials and shared out their projects via a Flipgrid video.



STEM Middle Goes Red STEM Goes Red is a community initiative by the American Heart Association that reaches young women to bring about awareness to women in STEM and providing education about cardiovascular disease in women. All seventh-grade students received a mini-lesson on cardiovascular disease and the history of the Go Red Initiative. On December 10, most our seventhgrade girls attended the virtual STEM Goes Red event. They heard from a variety of different women in various STEM career fields. � Based on the feedback we received from the girls, many were inspired by the women they heard speak and are interested in pursuing a wide range of STEM careers as they move on to high school and beyond!

Archeology: Plagues and Pandemics

In November, the humanities team hosted their first speakers. Two active archeologists from the University of Cincinnati met and interacted with students in a live virtual session. These two archeologists shared information on studying the field of archeology, careers in archeology, technological tools used to map and study items, and did a feature on how we study plagues and pandemics in history.

Our guest presenters shared photographs and stories from active dig sites and their past research. Students used this information to create projects related to archeology and the Bubonic Plague. Students also had the opportunity to compare historic disease to Covid. This dialogue happened in humanities classes, advisory groups, and in the larger guest speaker session. \diamondsuit





Above: Students and faculty watch a presentation on archeology. Left: Virus model created by Daisha Armstrong

Eighth Grade:

For the second quarter, 8th grade science students experimented with the forces of motion and challenged Newton's laws by building rockets designed to achieve maximum velocity, distance and apogee.

Prior to starting this project students had the opportunity to participate in several labs. The labs focused on building their knowledge of Newton's laws and how forces interact to change motion.

We started the STEM design process by collecting data through an online simulator. The data helped them to understand that the design of the nose cone has a big impact on the amount of drag affecting the speed of their rocket. Additionally, the shape of the fin can alter the stability of the rocket. After the students analyzed their data, they began applying their research to design and build a rocket. Lastly students were asked to defend their rocket design by explaining the forces acting on their rockets and how each of Newton's laws helped to guide their design.







Our hope is that we will be able to launch the rockets once the weather warms in the spring. \clubsuit

Fun with our Diverse STEM Learners

Fine Motor Craftiness with Ms. Droese

Students practice fine motor activities (holding glue sticks, picking up and pushing on paper, etc.) and communication skills (making selections, directing teacher assistance, etc.) while making crafts during Native American Heritage Month in November and holiday celebration month in December. Students in November learned about the history and culture of Native Americans, including dances (<u>https://www.youtube.com/watch?v=smSGUDRVPPo</u>). They also learned about how giving to others is just as meaningful as receiving from others, as they made and donated holiday cards to the seniors living at Wesley Ridge Community in Reynoldsburg. Many other fun fine motor and communication tasks included a snowman mask



Left: Al Bah shows off snowman craft.

Right: Ronish Subedi hides behind his Native American mask craft.



Spanish

During Quarter 2, students studied the holiday Día de los Muertos, and learned about the history behind this event and the significance of the symbols used and customs practiced during the tradition. Students created their own ofrendas, either digitally, by drawing them, or physically constructing them using materials at home, to honor a family member, friend, celebrity (or even a pet) that had passed away. They learned that Día de los Muertos is all about celebrating life and what the person loved while they were here, and not about mourning and being sad. We also completed a technology based ofrenda or una vela (candle) where students researched someone in the field of technology, and honored this person on their ofrenda dedicated to them. Students did a great job in their research and were very creative in both of these projects! Another project students completed later in Quarter 2 was after Thanksgiving, when we watched a documentary called "Living on One Dollar" and students learned about people living poverty in Guatemala, and many survive on less than \$1 a day. We then completed activities where we looked at how much money we spend each day, and how much other people spend daily. To see how we could help other people in Guatemala and around the world, students completed a project where they found a person or group of people who were looking for a micro-loan for a project to better themselves, their family, or their community and we had a discussion as to who would deserve our class loan if we were to give one. Students had great discussions about gratitude, survival, basic needs, and what we can do that help others in our communities and beyond.

Mi Vela:



Memory: Ellen Ochoa was the first Hispanic to go to space in 1993. Quote: "I tell students that the oppurtinities i had were a result of having a good ducational background. ducation is what allows you to stand out." Dedication: Being the first Hispanic to go to space. Intro en español: Ellen Ochoa. De donde eres: Ella es de Los Ángeles

Design

During Quarter 2, students constructed several basic mechanical machine models out of Fischertechnik component parts. These models were built from a few isometric diagrams only, aside from the usual set of sequenced instructions. Students gained though this activity an appreciation of the practice and importance of reverse engineering in everyday life.



Computer Science

In computer science with Mr. Ross students began planning and designing an App to address a need. Students Deborah Debela & Steven Cobbson created their App prototype on staying organized! By using the design cycle, developed an app to improve a problem that they saw in the world. \diamondsuit





Managing Stress Tips

Are you struggling with stress in your home? We are too!!! School is stressful for many students. When home becomes school, this stress can be even greater. Did you know though that our brain has a predictable biological reaction to stress? To decrease our students' stress. the greatest strategy we can use is to interrupt the cycle of stress that leads to panic or anxiety. You can take control of this reaction and keep the front of the brain where learning and decision making happens calm and thus engaged. Dr. Lisa Reigel shares with us how our brains deal with stress. Click here to watch her video. She then shares with us tips parents can use to teach their students about stress in the brain and how to stop their stress reaction. Click her to watch the video. Want to know more about the Ohio Native, Dr. Lisa Reigel, click here.*

Closed Captioning Reading Strategies

Many parents ask for simple strategies to support their readers at home. Today we look at one of the most simple--Turn on your Closed Captioning. Several Studies (e.g., Bowe & Kaufman, 2001; Evmenova, 2008; Linebarger, 2001; Rickelman, Henk, & Layton, 1991) indicate that captioning and subtitles can help strengthen the following reading skills of students with learning disabilities, english language learners, and struggling or beginning readers:

- reading speed and fluency
- word knowledge
- decoding
- vocabulary acquisition
- word recognition
- reading comprehension
- oral reading rates

Lower level readers may tend to avoid reading activities, causing their exposure to print to be minimal. This causes their reading skills to fall behind that of their peers. Maximizing print exposure through the use of captions, both at home and at school, can add many hours of reading practice and literacy skill development (Koskinen et al., 1993; Kothari et al., 2004). �

COMING SOON

School Wide Book Read



Fifth Grade: *Zoe in Wonderland* by Brenda Woods

Sixth Grade: *See You in the Cosmos* by Jack Cheng





Seventh Grade: *Wink* by Rob Harrell

Eighth Grade: *The Impossible Clue* by Sarah Rubin



Important Upcoming Events

For more information regarding upcoming events check out our <u>webpage</u> or our <u>Facebook</u> and <u>Twitter</u> Pages.



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