Sebastian Sentinel Sentinel Principal's Message Dear Eagle Families,

Last school year, Ms. Taylor was tasked with putting together our STEM certification application. This application reflected all the hard work of our students, faculty, STEAM Advisory Board members, and families over the past few years. As you have already heard I'm sure, we were successful in our application and Sebastian Middle School was again certified as STEM certified school.

This is a very special edition of The Sebastian Sentinel dedicated to our exceptional school and its' foundation in the key components of STEM learning:

- Problem Solving
- Creativity
- Inquiry

All of our students participate and benefit from their experiences in a school culture that calls upon them to think independently and celebrates their learning through opportunities to preset their own findings to peers, faculty and community members. The pandemic has changed how we are doing things this year, but we remain committed to our STEM culture. Coming up this semester we will be launching Inquiry projects in our classrooms, and releasing a brief film highlighting our students' experiences in the amazing Greenhouse that was donated by The Halbrook Family Foundation.

I would like to thank Ms. Hensley for her many contributions to the success of our school community as she moves to her new position at Pacetti Bay. She will be missed by us all. Please give a warm welcome to Ms. Gamble as she joins our Eagle family, and becomes part of our community on January 26th!

I remain, with much pride, your Principal,

Kirstie Gabaldon Principal

If you aren't on our mailing list, please check out Ms. Gabaldon's weekly updates by clicking on the Principal's Message on the Sebastian Website.



Sebastian Middle School

2955 Lewis Speedway St. Augustine, FL 32084 **904-547-3840**

Kirstie Gabaldon

Principal

Angela Hensley
Assistant Principal

Kevin Hayes *Dean*

Matt Hodges Instructional Literacy Coach

<u>/ision</u>

At Sebastian Middle School, all students will achieve personal success in their learning and become responsible and productive citizens.

Mission

In order to prepare our students to live in and contribute to a changing world, Sebastian will provide a balanced, varied school curriculum designed to meet the academic, cultural and social needs of individuals from the diverse backgrounds of our community.

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^{*}Please watch for our next newsletter in March 2021, and bi-weekly electronic news updates.

Sebastian Middle School Website

The SMS website has up to date information that is important to stay informed about all activities at Sebastian. It can be found at:

www-sms.stjohns.k12.fl.us/





SBMS STEM PROGRAM

Sebastian Middle School's STEM program was born and obtained its original program certification through the University of Florida Lastinger Center during the 2016-2017 school year. At the heart of Sebastian's STEM program is Inquiry Hour, which provides every student access to authentic, inquiry-based learning experiences - outside of their scheduled courses - for one hour per week for two 8-week sessions each year. Also integral to our program are our STEM and ICT courses, along with a school culture where project-based learning and student inquiry is embedded as a part of our daily practices. Of course, due to the pandemic we have been unable to run Inquiry Hour this year but we look forward to it's return.

Sebastian Middle School believes that STEM education is a transformative approach to learning that guides students through an exciting world of inquiry, problem solving and creativity. The core subjects of science and math are connected to language arts and social studies through interdisciplinary activities and units infused with the arts and technology. Students engage in inquiry activities and make real-world connections as they produce both digital and performance-based artifacts. These projects often incorporate the engineering design process and multiple technological tools. Students take on leadership roles in the STEM environment and develop a deeper understanding of the conceptual connections within their subjects.

When our program began in 2016-2017, Sebastian offered two STEM related courses. Currently, we offer three ICT courses and three STEM courses.



Our faculty for these courses includes Mr. Bernie Huffman, who teaches all ICT courses, and Mrs. Megan Johns and Mr. Robert Raimann, who share the STEM courses. As these teachers are also committed to continuous improvement, they each participate in professional learning communities with teachers of the same courses at other schools within the

District and regularly meet to plan common lessons, share expertise and work collaboratively to improve instructional practices.







SBMS STEM PROGRAM...continued



In the 6th grade, students take Introduction to Technology and Exploring Technology. These courses are taught by Mr. Raimann and Mrs. Johns. Mrs. Johns is a former biomedical engineer who became a teacher. Mr. Raimann has extensive experience in teaching STEM classes across multiple

grade levels. Both of these teachers are exemplary and are, in fact, this year's Rookie Teacher of the Year and Teacher of the Year for Sebastian.

In 7th grade, students' progress to Exploration of Engineering Technology and Robotics Technology whilst in 8th students take Exploration of Aerospace Technology and Green Construction/Architecture. The curriculum for these classes is aligned to the Florida standards.



A PARTNERSHIP TO HELP ENCOURAGE WOMEN IN IT

Since 2015, Sebastian has partnered with Citigroup to offer all female students a career education program. Citi's "Women in IT" program was created in 2014 by employees from Citi's Jacksonville-based Global Consumer



Technology division and is a great opportunity to highlight IT and the many different careers and immense opportunities ahead of our students - particularly females.

The sessions are 90 minutes in length, consisting of a presentation, videos, and games facilitated by Citi employees. Topics include facts about women in IT, the types of roles that are available, inspirational personal stories, and information about the lifestyle benefits that an IT career can provide.

Students are also asked to complete web-based assessments before and during the course to help identify activities that interest them. The course then relates those skills and interests to careers like project management,

computer programming and graphic design, among others. Each role description also includes background on the average salaries and typical educational requirements.







OFF CAMPUS ACTIVITIES

Prior to restrictions caused by Covid, our students participated in off campus activities described here.



Field Study at Leonard's Studio Production Facility

In late January, Ms. Johns' 6th grade STEM students participated in a field study at the Leonard's Studio Production Facility where they experienced the manufacturing process at work, which tied into their previous lessons on the manufacturing processes and STEM careers. Additionally, they learned about several STEM careers from people working in those jobs. Careers they were exposed to included graphic design, manufacturing engineering, and machine operation.

NASA Activities:

In Fall 2019, students in our elective courses for gifted students participated in a field study at Kennedy Space Center where they participated in the "Mars Base I" program. Students rotated through a day of PBL experiences where they participated in growing and harvesting plants

in the Botany Lab, manipulating robots to create solar energy, and analyzing and relaying data.

Through the field study, we were able to develop a relationship with Tyler Hines, NASA Kennedy Space Center Educator. Mr. Hines spent two days at SMS in February 2020 speaking to 7th and 8th grade STEM classes and 8th grade honors Biology students about the role of botany in space and then shared with all 6th grade students about the role of technology in space exploration throughout history.

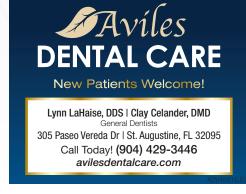
Mr. Raimann will be hosting virtual discussions

with Mr. Hines and his 8th grade STEM classes to discuss the role of botany in space and how it relates to the inquiry-based projects they will conduct in an upcoming unit on agriculture.

This year, we look forward to continuing to grow our relationship with Kennedy Space Center and are excited to welcome Mr. Hines as the newest member of our STEAM Advisory Board. Unfortunately, school district rules have restricted field trips until further notice, but we are looking to engage Kennedy Space Center in a virtual learning experience for students later this Fall and hope on-site field studies will be available later in the school year.









Community Engagement Initiatives

SMS hosts several events throughout the year with the goal of welcoming our Eagle families and community members to learn about our programs. STEAM Night is held annually in the Spring to highlight our STEM partners and the STEAM learning happening withing our building. Our community partners such as the University of Florida Whitney Laboratory for Marine Bioscience and Northrup Grumman set up hands-on learning activities set for guests to participate in, while our student presenters display their STEM projects and share about their learning experiences with attendees.

Unfortunately, our Spring 2020 STEAM Night could not be held as planned due to COVID-19, so we hosted the event virtually. Students, parents and our community partners were directed to our website to virtually experience the STEAM learning happening at Sebastian and connect with STEM experiences in our community.

"Rising 6th Grader Night" is held in February of each year to welcome students to our school. We use this night as an opportunity to showcase each of our elective courses with student performances, demonstrations and project displays, in advance of when students will meet with our Counselors to select their electives for the following year. All students and parents in our feeder pattern receive an invite to attend.



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STEM ADVISORY BOARD

We wouldn't be successful as a STEM accredited School without the help of our STEAM Advisory Board.

Sebastian Middle School's STEAM Advisory Board is comprised of community partners from varying backgrounds. We are proud to have representatives from the following partner organizations:

- Northrup Grumman
- Leonard's Photography
- American Association of University Women (AAUW) St. Augustine, FL Chapter
- Vested Metals
- Whitney Laboratory for Marine Bioscience
- Halbrook Family Foundation/Diane's Natural Food Market
- First Coast Technical College
- Kiwanis Club
- University of St. Augustine



Additionally, our Board boasts a diverse group of parents and community leaders including a retired airline pilot, a software engineer and a finalist for the Steel Manufacturers Association Next Generation Leadership Award which promotes youth participation in steel manufacturing education.

Our STEAM Advisory Board meets five times per year where we engage in project updates, shared decision making and planning of partner involvement. Our Board meetings are also used to showcase student work, with several students presenting recently completed projects while the STEM teachers provide a glimpse of upcoming lessons and projects.

Through shared decision making, the STEAM Advisory Board was instrumental in researching the best drones to purchase for the STEM class using funds donated from the Kiwanis Club. Members of the Board also participated in the November 2019 joint faculty meeting where all teachers and members of PTO, SAC and the STEAM Advisory Board worked to brainstorm project ideas for the Spring 2020 Inquiry Hour.

Students are given opportunities to present their STEM learning to our STEAM Advisory Board. At each board meeting a different group of 3-5 students from Mr. Raimann's or Ms. Johns' STEM classes are asked to present a recent project they have completed in class. During the presentations, students discuss their process for completion, challenges faced along the way and how they adapted their plans, and field questions from our Board members.











STEM ENRICHMENT THROUGHOUT OUR SCHOOL

At Sebastian Middle School, STEAM experiences aren't confined to science and math classes and, in fact, are integrated in our daily curriculum across all content areas. For example:

- The 8th grade ELA teachers developed a PBL titled "Surviving A Pandemic." The PBL was integrated into the novel study of Fever 1793 and tasked students with creating a budget for a family to survive a pandemic, mirroring the survivalist background of the novel. Students were given different family scenarios to choose from and had to analyze and evaluate what bills were essential and non-essential in order to survive a pandemic lasting 150 days, as well as develop an action plan to acquire supplies, plan for school closures and childcare, and what to do should a family member become ill.
- All 394 students enrolled in an art course during the 2019-2020 school year completed a Grid Enlargement project that marries art and math standards. Utilizing this method students must create a proportionately accurate 12"x12" drawing that started as a 6"x6" photograph, which requires them to be able to solve area and surface area math problems as well as identify the relationships between geometrical figures using the x- and y-axis to navigate the grid.
- Our art teachers have been the recipients of a grant from Investing in Kids (INK!), a non-profit whose mission is to fund innovative programs and classroom resources to promote the academic success of students. The INK! grant funded all 6th grade art students to create Doodlebots, a project-based learning experience that coupled art and science standards, where students learned to connect a motor, create a closed circuit with a battery to affect the trajectory of their robot and problem-solve glitches as they arose.



- All students have access to our Media Center where our Media Specialist hosts monthly STEM-related Maker Space Challenges. Challenges include a red solo cup challenge, where students simulate building upward using cups to create a free standing tower that stands for at least one minute, and an Ozobot challenge, where students try to create the longest path for the Ozobot to travel.
- Red Ribbon Week contained STEM experiences where all students had the opportunity to participate in daily activities associated with the four forces of flight as we "Soar Above Drugs and Bullying."



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This is a wonderful way for your business to get community recognition and exposure, and at the SAME TIME help support your local schools!

Sebastian Middle School Susan Connor • susan.connor@stjohns.k12.fl.us



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