

March
Volume 1, Issue 1

Azalea Elementary School



Home of the Eagles

The STEM Effect

What is STEM?

STEM is an acronym for Science, Technology, Engineering, and Mathematics. The PCS STEM Academies offer rigorous programs for children grades 2nd through 12th emphasizing:

- Student engagement in science, technology, engineering and mathematics utilizing the K-12th STEM Department's Engineering Design Process.
- Development of student knowledge and application of STEM content and processes.
- Collaboration and learning from other students and from STEM professionals.
- Promotion of academic success and higher education.
- Encouragement of student interest in additional STEM learning opportunities and careers.

To learn more about the PCS STEM Academies, please visit
www.pcsb.org

Brought to you by



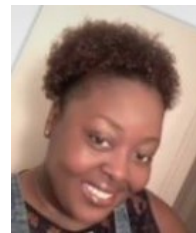
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SPECIAL POINTS OF INTEREST

- Pinellas Education Foundation
- Young Innovators prepare for the Invention Convention

Ms. Rushing



GAME CHANGER



Monday, November 20, 2017 was a day that I will not soon forget. Let me start from the beginning my name is Ms. La Toyia Rushing , AES STEM Academy Facilitator (Intermediate) and my partner in STEM is Mrs. Candace Reed, AES STEM Academy Facilitator (Primary). Mrs. Reed and I have a deep affinity for everything Science, Technology, Engineering, Arts and Technology. Mrs. Reed and I both possess graduate degrees in Math & Science and/or Engineering and we truly enjoying teaching and learning along side of our students. In November, Mrs. Reed and I attended a STEMIE Training

where we both gained a new and fresh perspective on teaching and presenting STEM. It was then that we both decided that our STEM Academies were about to change course and embark upon a new journey!

Let's Go!



Mrs. Reed



BINARY BRACELETS

Have you ever wondered what a handful of colored beads and binary coding have in common?



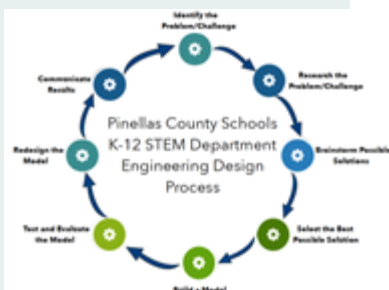
A	■□■□■□■□	N	■□■□■□■□
B	■□■□■□■□	O	■□■□■□■□
C	■□■□■□■□	P	■□■□■□■□
D	■□■□■□■□	Q	■□■□■□■□
E	■□■□■□■□	R	■□■□■□■□
F	■□■□■□■□	S	■□■□■□■□
G	■□■□■□■□	T	■□■□■□■□
H	■□■□■□■□	U	■□■□■□■□
I	■□■□■□■□	V	■□■□■□■□
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K	■□■□■□■□	X	■□■□■□■□
L	■□■□■□■□	Y	■□■□■□■□
M	■□■□■□■□	Z	■□■□■□■□

Well, the STEM Scholars at Azalea Elementary quickly learned. It was a beautiful fall day and the 2017-18 STEM Academy had just begun. Our students' were eager to meet Mrs. Reed and I and too be honest we were all a bit eager as we were looking forward to a new year and a fresh, exciting new STEM program. We quickly introduced ourselves to the students and exchanged greetings to our new students...when all of a sudden Mrs. Reed exclaimed that she needed help and the scholars would have to join her on a rescue mission! The students, excited and more than willing to help were tasked with decoding a message and sharing that message with their teammates.



This icebreaking introduction to the thrilling world of Science, Technology, Engineering and Mathematics set the tone for the year. Each week , our scholars eagerly

anticipate STEM Thursdays! I know you are wondering if the mission was a success or complete failure. Let's put it this way, the children merely thought that they were playing a game with Mrs. Reed and myself, however we were introducing the students to coding and the Engineering Design Process. So, I think Mrs. Reed would agree with me that rescue mission was a total success!





Candy Catapult Launcher

Items Needed:

8 Popsicle Sticks

4 rubber bands

Hot glue gun

Glue stick caps/bottle caps

Candy corn

Starburst



Essential Question: Starburst or Candy Corn Which will travel best?

CATAPULT CHALLENGE

On Thursday, November 2, 2017 the AES Primary and Intermediate STEM Academy students were greeted with the following message.

Dear STEM,

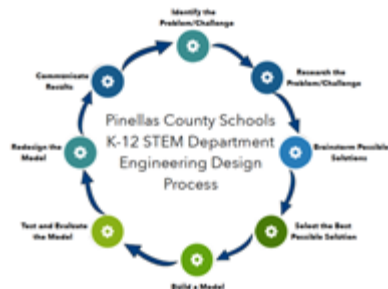
The students of Poyoloco are trapped on an island due to Storm Irma. They have no way to Trick or Treat. Your job is to create a catapult to get candy to the island of Poyoloco. You must also decide which candy will travel the best.

Are you up for the mission? Good Luck!

Was your mission successful? Y___ N___

Which candy traveled the best? _____

Engineering Design Process



The students, equipped with the EDP were presented with the challenge eagerly accepted their mission and sought to help the students of Poyoloco.



NASA ROBOTIC ARM DESIGN CHALLENGE

Congratulations! Our STEM Academy scholars were hired by NASA to help design and redesign a Robotic Arm to grip, move and release items. NASA uses robotic arms to accomplish tasks that are potentially too dangerous, too difficult or simply impossible for astronauts to do. NASA heard that Azalea Elementary School led by Michael Rebman, Principal has the best scholars in Pinellas County because of the skills gleaned in school and by participating in the STEM Academy. NASA reached out and asked if they could proceed with asking us to help their astronauts using the Engineering Design Process to problem solve and provide viable solutions for this unique project. *Please note that this mission is purely fictional, and our scholars have not been hired by NASA).

The scholars assembled into five teams:

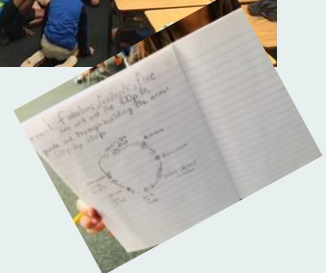
Team 1: BTE Best Team Ever

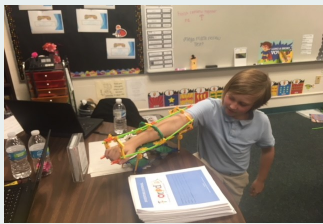
Team 2: Robo Masters

Team 3: Fantastic Fantoms

Team 4: Amazing Mission to Mars

Team 5: Fabulous Fantastic Five





PINELLAS EDUCATION FOUNDATION

On behalf of Mrs. Reed, myself and the amazing students who participate weekly in the AES STEM Academies we want to send our heartfelt thanks to Donna Burns and Ann Stretch of the Pinellas Education Foundation who provided us with grants from Jabil. These grants totaling almost \$2,000 dollars provided our scholars with Rube Goldberg books, K'nex STEM Building Kits to help our scholars prepare for the STEMIE Invention Convention and Pinellas County Schools

Annual STEM Expo.



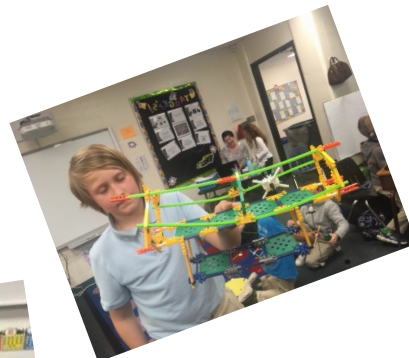
Home of the Eagles

OK GO! AZALEA EAGLES INVENT (PRIMARY)

It is said that a picture is worth a thousand words, so the AES STEM Academy Scholars wanted the last two articles to show their works in progress as we prepare for the upcoming conventions. Enjoy!



OK GO! AZALEA EAGLES INVENT (INTERMEDIATE)



FLORIDA INVENTION CONVENTION

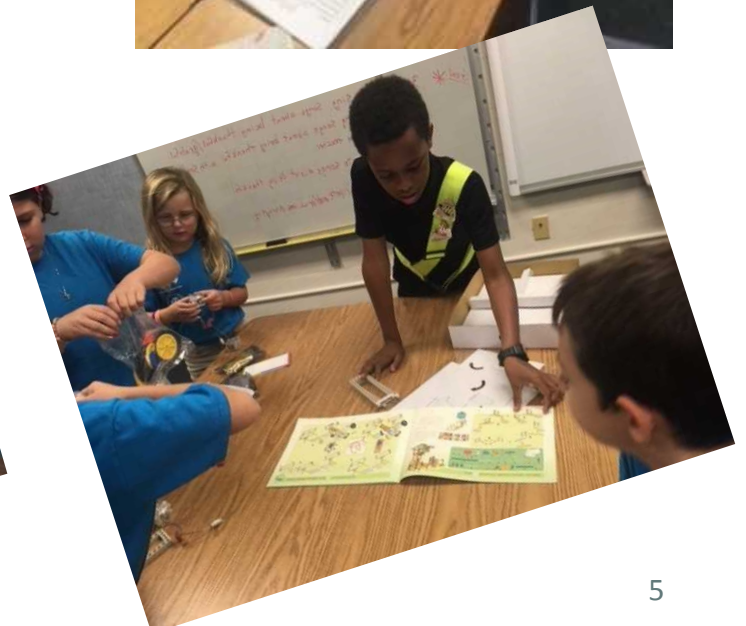
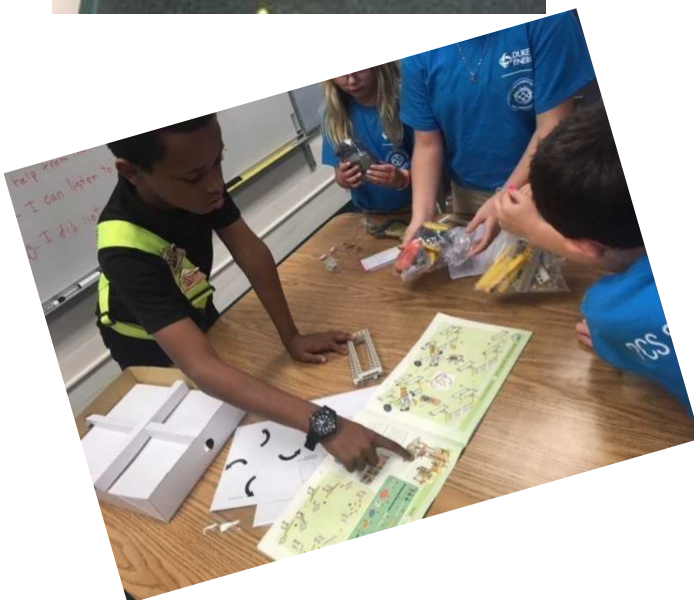
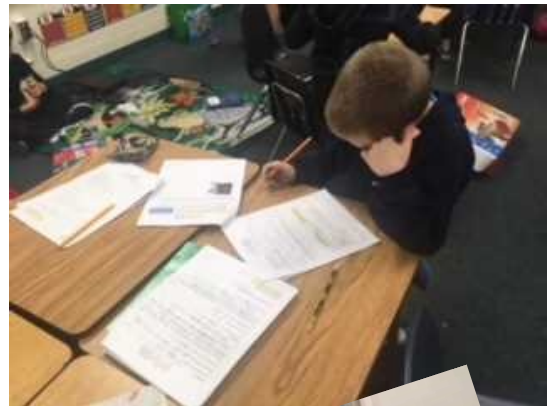
In April some of our students will participate in the STEMIE Florida Invention Convention which will be held at the Pinellas Technical College in St. Petersburg, Florida. During this convention students from Pinellas County Schools will be able to showcase their imagination and creativity.



Innovation Awaits!



Home of the Eagles





NOTES FROM THE PCS K-12 STEM SPECIALIST

ELECTRONIC COMMUNICATION

The STEM Academies of Pinellas County are **GOING GREEN!**

Parent/Caregiver Email Update

With 270 STEM Academies impacting approximately 5,400 students and their families, we are using email as our main form of communication.

During the week of March 12th, you will receive this newsletter in an electronic version that your child's STEM Academy created. It is important that you keep your child's STEM Academy teacher up to date with any changes to your email address & contact information throughout the year.

PCS STEM Website Update

I use this site www.pcsb.org/STEM to provide up-to-date information on STEM events, scholarship opportunities, videos, photographs, STEM Academy locations and STEM summer camps.

PCS STEM Apparel

PCS STEM Academy logo apparel is available to order! There are t-shirts, polo's, jackets and more for both male and females! <http://www.logoutfitters.org/pinellas-county-schools>

All payments are made directly to the company. The K-12 STEM Department does not collect any profits from the sales.

ANNUAL STEM EXPO

Last year, with an overwhelming response of more than 3,200 people in attendance, I am happy to announce that we will be hosting our annual PCS STEM Expo!

When: Saturday, April 28, 2018 10am-2pm

Location: USF St. Petersburg Campus

Cost: Free

Be on the lookout for additional details during the coming months from both your STEM Academy teacher and on the district STEM website www.pcsb.org/STEM.

COMMUNITY AND BUSINESS SUPPORT

Volunteer's Needed

Are you someone who likes to work with their hands, has an interest in STEM content and wants to impact the future of PCS STEM Academy students? We are always looking for volunteers who are willing to donate their time. If you are interested in becoming a volunteer to help support the PCS STEM Academies, please email the PCS K-12 STEM Specialist, Laura Spence at Spencela@pcsb.org.

Business and Community Support

If you are a business or community agency that would like to become involved through providing speakers, donating resources, offering on site teacher PD opportunities, and other opportunities not mentioned. Please contact the PCS K-12 STEM Specialist Laura Spence at Spencela@pcsb.org to learn more.

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STEM is all around us and with the national emphasis on STEM education, Pinellas County is engaging students to explore these areas of study. **Science Rocks Pinellas** is an educational television program produced with the K-12 STEM Department of Pinellas County Schools where the main focus of the program is STEM! With the unique opportunities that Tampa Bay offers us, we showcase our students and teachers interacting with components of natural science and STEM within our community; ranging from the waters and parks surrounding Tampa Bay to high-tech businesses and robotics --even theme parks! Our students and teachers go beyond the classroom to uncover the fascinating STEM content of the Tampa Bay area. K-12 STEM Specialist, Laura Spence is the host and WPDS-TV14 Station Manager Dave Cook is the producer of the program.

WPDS-TV14 is proud to announce that **Science Rocks Pinellas** is a 2x winner of the prestigious Telly and Communicator awards for excellence in educational television programming.

Science Rocks Pinellas airs Monday and Friday evening at 1pm and can be viewed on Spectrum Channel 635 or Frontier Channel 46 throughout the Tampa Bay area. Past episodes can be viewed on the WPDS-TV14 website www.wpds.tv/WPDSProgramVideos/Science_Rocks_Pinellas

and the WPDS TV14 You Tube Channel: <https://www.youtube.com/channel/UCUazp3el5KHoxZKcEh2U6hQ>

