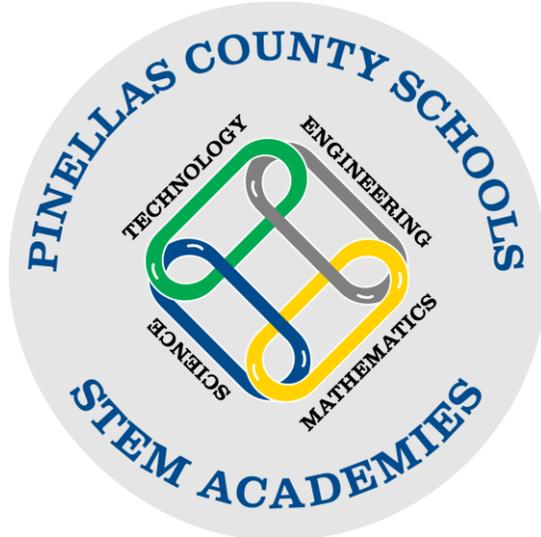


# The STEM EFFECT

A PCS STEM Academy Newsletter



## What is STEM?

STEM is an acronym for Science, Technology, Engineering, and Mathematics. The PCS STEM Academies offer rigorous programs for children grades 4th through 8<sup>th</sup> emphasizing:

- Student engagement in science, technology, engineering and mathematics in multiple ways in a supportive and engaging environment.
- 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.

## Issue #1, February

### PAGE 1



Anona STEM Academy redesigns a car to create the ultimate driving machine

### PAGE 2



Team ScreenSaver calls upon all their engineering skills to take on the Drone Delivery challenge



Quotes and Poetry from the minds of mathematical meter makers

### PAGE 3



Anona STEM Academy uses the engineering design loop to take on the Crane Challenge

### PAGE 4



Explore this page to learn more about PCS STEM Academy updates from a district perspective.

*"To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science."*

## Stem Academy's Need for Speed

Today we perfected our car, we raced it with all of the others! Each team had 3 running times. Our team were the Chalet French Fries. Our first run time was 5.85 seconds. The second was 6.08. We knew that to win we had to make it go faster. All of the other

team took there last turn then it was our turn. We got it ready and our times was 5.57. Mr. Black showed us the scores, and it turned out that our team won! Our team was so happy, apparently all the things we changed paid off.

## Phone Challenge: Calling all Engineers

### 1/6 Research:

We observed the drone outside and we realized that 6 meters is really high, 6 meters is higher than our roof! We were wondering if phone could survive that height. I think an alternate height could be 3-4 meters

### 1/13 Materials:

Memory foam, cotton balls, plastic bag, string, cardboard/poster board, feathers, hot glue gun, popsicle sticks, newspaper, balloons, duct tape

### 1/13 Company Name:

ScreenSaver

### 1/13 Motto:

Your phone will never break if you have ScreenSaver!

### 1/20 Proto Type:

Today we made a huge progress from just an idea to the actual thing. It was a little difficult but it was fun. We were able to do most of it. We still need more make up sponges though. It also didn't turn out as we expected.

### 1/27 Testing Solution:

After our test we decided to ditch the parachute. It had no use. The phone fit perfectly. We also added more newspaper pictures and made it say "Obama approves". Funny!



*ScreenSaver Inc.  
prepares for a safe  
STEM delivery !!!*

## What STEM means to us...



*Anona's STEM Academy conquering another challenge with innovative teamwork*

"...the opportunity of imagination"- Elijah

"...the key to a successful life"- Tomas

"...the opportunity to invent" – Mr. Black

"...fun and excitement"- Michael

"...working together... learning how things mechanically move" –Jolene

STEM is awesome

If you are in it

You will blossom

Science, technology, engineering, and math

Will lead you towards a new path- Rohan

Shockingly fun

Totally hands on activities

Exciting results

Magically building- Elyssa



## Crane Reflections: Lifting our Minds

In STEM, we discussed how we would make the crane to lift up “the building materials” and carry them to the other side of the “lake”. We discussed the way the claw would be shaped, and we decided on a claw that goes around the material to lift it up easier. Then, we debated on whether our crane should have wheels to move easier. We decided it should have wheels, just in case. We researched cranes to see how we’d put the piece together to make it tall and wide enough.

Keegan, our teammate, had an idea to build a stick with a piece that made it steady, and if we used the remote control, to go up and

down. Elijah and I had the idea to put wheels on the body of the crane, so that it could help the crane move the “object”. Mr. Black shared with us that the “object” would be a very light ball. Now we had an idea to build the crane. Drew thought the crane should be a box. Drew and I worked on the box, Elijah worked on the body, and Keegan worked on the stick to help move the “box” or crane.



# Notes from the PCS K-12 STEM Specialist

## Electronic Communication

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

### Parent/Caregiver Email Update

With 178 STEM Academies impacting approximately 3,500 students and their families, we are using email as our main form of communication.

During the week of February 29, you will receive an electronic version of your child's STEM Academy newsletter that **their** Academy created. It is important that you keep your child's STEM Academy Facilitator up to date with any changes to your email address.

### PCS STEM Website Update

I use this site to provide up-to-date information on STEM events, scholarship opportunities, videos, photographs, STEM Academy seat availability, STEM summer camps and current STEM trend data/articles/research. Please visit [www.pcsb.org/STEM](http://www.pcsb.org/STEM).

## 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.logooutfitters.org/pinellas-county-schools>

## Annual STEM Expo

Last year with an overwhelming response of 2,300 people in attendance, I am happy to announce that we will be hosting our 3<sup>rd</sup> annual PCS STEM Expo!

When: Saturday, April 30, 2016

Location: USF St. Petersburg Campus

Cost: Free

Be on the lookout for additional details during the coming months!

## 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](mailto:Spencela@pcsb.org).

### Business and Community Support

If you are a business or community agency that would like to become involved by: 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](mailto:Spencela@pcsb.org) to learn more.

## CH 14

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 7pm and can be viewed on Bright House Channel 635 or Verizon Channel 46 throughout the Tampa Bay area. Past episodes can be viewed on the WPDS-TV14 website [www.wpds.tv/WPDSProgramVideos/Science\\_Rocks\\_Pinellas](http://www.wpds.tv/WPDSProgramVideos/Science_Rocks_Pinellas)

and the WPDS TV14 YouTube Channel:

<https://www.youtube.com/channel/UCUazp3e15KH0XZkcEh2U6hQ>