



October 14, 2019

# Technology Department

## FIRST DEPARTMENT NEWSLETTER

The publication of this newsletter is to raise the awareness of our parents, community and students as to the wonderful things taking place in the Technology Department of Pine View School. The goal is to have a new monthly publication to share and celebrate technology academics, student success, and opportunities for our students / community.

LET US  
KNOW  
WHAT  
YOU  
THINK

**Feedback is a gift**

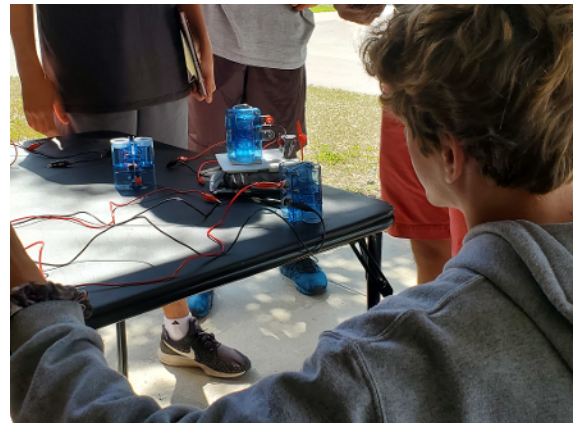
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### Project Lead The Way Engineering

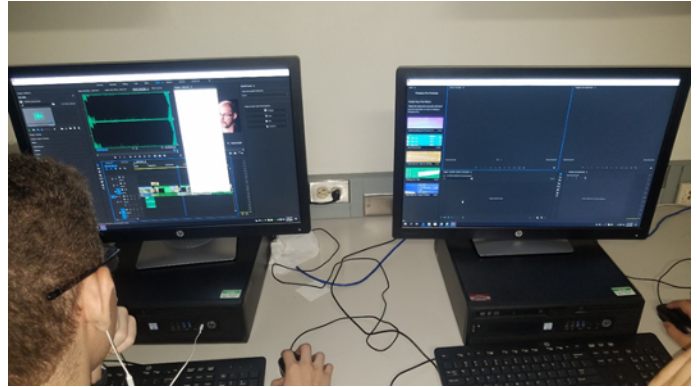
Each PLTW Engineering course engages students in interdisciplinary activities like working with a client to design a home, programming electronic devices or robotic arms, or exploring algae as a biofuel source. These activities not only build knowledge and skills in engineering, but also empower students to develop essential skills such as problem solving, critical and creative thinking, communication, collaboration, and perseverance.

This last week, 2nd year engineering students built hydrogen fuel cell airboats applying alternative energy sources to their design solutions.



## Digital Multimedia

Students in Goebel's digital multimedia classes are working towards their industry certifications in Adobe products. First year students are getting their certification in video editing which includes skills learned in Premiere Pro 2018. Second level students are working to achieve certification in visual communication using Photoshop. Level three and four students are working on individual and group projects to obtain higher level skills, as well as creating the Pine View School news program, known as PVTv



## 2nd Grade Tech Class

2nd grade tech class is happy to report that they are advancing in their learning of the keyboard. They find words that they know from books and are progressing through the lessons.



## AP Computer Science Principles

In fall 2016, the College Board launched its newest AP® course, AP Computer Science Principles. The course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world.

In the first quarter of the school year, Ms. Davidsmeyer's AP CSP students have completed three units. In "Unit 1: The Internet", students explored the technical challenges encountered by the pioneers of the internet and examined the structure and design of the today's internet. In "Unit 2: Digital Information", we further explored the ways that digital information is encoded, represented, and manipulated. Being able to digitally manipulate data, visualize it, and identify patterns, trends, and possible meanings are important practical skills that computer scientists do every day. "Unit 3:



Intro to Programming" introduced the foundational concepts of computer programming, which unlocks the

ability to make rich, interactive apps. This course uses JavaScript as the programming language, and App Lab as the program environment to build apps, but the concepts learned in these lessons span all programming languages.

## Information and Communication Technology Essentials

The 6th and 7th grade tech classes taught by Ms. Davidsmeyer empower students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem solving, and fun!

So far this year, students have participated in highly interactive and collaborative introduction to the field of computer science, as framed within the broader pursuit of solving problems. They accomplished this through a series of puzzles, challenges, and real world scenarios. Students also are working on Web Development, using HTML and CSS, creating a personal website. In the latest unit, students build on their coding experience as they create their own animations, interactive art, and games. showing and practicing quick and efficient programming techniques and algorithm for competitive use. Competitions may include ASACO, TSA, Google codejam, and more.

# TECHNOLOGY DEPARTMENT SPONSORED CLUBS

## Pine View Biomedical Engineering Society (PVBMES) Student Chapter

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The Biomedical Engineering Society's (BMES) student chapter is the foundation for our society, uniting and promoting the future of the biomedical engineering profession. This chapter is to offer high school students the chance to establish leadership skills, networking skills, as well as the opportunity to participate in a student design competition, an annual meeting, and a poster presentation in a BME related field. PV BMES is the 2nd high school student chapter established in the Nation.



## FIRST Robotics Competition | FIRST

The FIRST Robotics Competition (FRC) is an international high school robotics competition. Each year, teams of high school students, coaches, and mentors work during a six-week period to build game-playing robots that weigh up to 125 pounds. Robots complete tasks such as scoring balls into goals, flying discs into goals, inner tubes onto racks, hanging on bars, and balancing robots on balance beams. The game, along with the required set of tasks, changes annually. While teams are given a standard set of parts, they are also allowed a budget and are encouraged to buy or make specialized parts.

FIRST Robotics Competition has a unique culture, built around two values. "Gracious

## Comprehensive Photography

Educate and improve club members skills in an environment equally utilizing film and digital photography.



## Minecraft Club

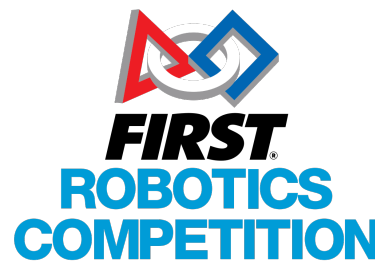
The purpose of Minecraft Club is to deliver a fun activity to students that enjoy Minecraft. Students play together as a group on Minecraft Education Edition building massive statues and houses in mountainsides and have fun with friends.



## Competitive Programming Club

Community of enthusiastic programmers showing and practicing quick and efficient programming techniques and algorithm for competitive use. Competitions may include ASACO, TSA, Google codejam, and more.

Professionalism" embraces the competition inherent in the program, but rejects trash talk and chest-thumping, instead embracing empathy and respect for other teams. "Coopertition" emphasizes that teams can cooperate and compete at the same time. The goal of the program is to inspire students to be science and technology leaders.







## The Technology Student Association

The Technology Student Association (TSA) is a national organization of students engaged in science, technology, engineering, and mathematics (STEM).

TSA chapters take the study of STEM beyond

the classroom and give students the chance to pursue academic challenges among friends with similar goals and interests. Together, TSA chapter members work on competitive events, learn and apply leadership skills, and may attend conferences at the state, regional, and national levels. TSA chapters also are committed to a national service project and are among the most service-oriented groups in the community.

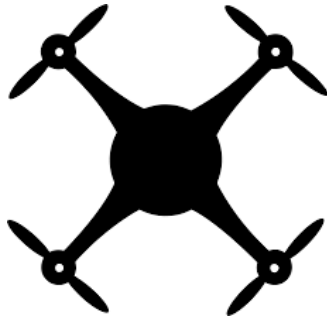
The cost to students: their event materials, TSA outfit, hotel and food for overnight competitions. All students of Pine View have their membership and event fees paid for though the District CTE Department. .

## Pine View's Competitive Drone Club

As part of the The Technology Student Association (TSA), the Pine View Competitive Drone Club is apart of pioneering drones in Sarasota County Schools.

This last year's competition:

As part of your city's Emergency Services Response Unit, you are responsible for responding to emergency situations and using your UAS as required. This competition will test your preparation in designing and building a UAS that has advanced features, as well as your piloting capabilities.



## VEX Robotics Club

In the VEX Robotics Competition, teams of students are tasked with designing and building a robot to play against other teams in a game-based engineering challenge. Classroom STEM concepts are put to the test as students learn lifelong skills in teamwork, leadership, communications, and more. Tournaments are held year-round at the regional, state, and national levels and culminate at the VEX Robotics World Championship each April!



# WHAT IS CTE?



Career & Technical Education is offered at our schools through course pathways that prepare students to be college and career ready by providing core academic skills, industry-standard credentials, and technical job-specific capabilities. CTE students experience real-world and hands-on activities helping them to gain specific skills for their future. They have the opportunity to use the equipment, software, and tools that are currently utilized in our local workforce. CTE pathways offered in Sarasota County Schools are aligned to our current region's occupational demands. Our schools have established partnerships with local employers and postsecondary institutions enabling clear roadmaps to certifications, degrees, and sustainable careers.

# TECHNOLOGY DEPARTMENT CLUB MEETING TIMES

- Tues 1-2pm PV Drone Club (TSA Event) Room 013 \*\***
- Tues 1-2pm Middle School Minecraft Club - Room 015**
- Tues 2-3pm Biomedical Club - Room 121**
- Wed 1-3pm Competitive Programming Club - Room 015**
- Wed 2-3pm Competitive Coding - Room 015**
- Thurs 1-2pm VEX Robotics (TSA Event) Room 013 \*\***
- Thurs 2-3pm Technology Student Association - Room 013 \*\***
- Thurs 3-5pm FIRST Robotics Competition - Room 013**

\*\* CTSO(s) - Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning and real world application.

## CALENDAR

### OCTOBER 4TH

CTE: Manufacturing Day  
Engineering trip to PGT

### NOVEMBER 9TH

Pine View Fair

### NOVEMBER 16TH

Technology Student Association  
District / Regional Competition  
Southeast High School

### DECEMBER 9TH-15TH

Computer Science Week  
- Hour of Code

### FEBRUARY

Career Technical Education  
Month®

### FEBRUARY 26TH- MARCH 1

Technology Student Association  
State Competition  
Orlando

## CAREER TECHNICAL EDUCATION FACTS

- Between 2012 and 2022, there will be 50,557,900 job openings for CTE graduates - of those jobs, 15,627,500 (30.9%) will be new!
- The Perkins Act is the main source of funding for CTE programs nationwide
- For every \$1 of government funding in CTE, taxpayers earn as much as \$12.20 in benefits in return
- In 2014, students earned a total of 3,842,589 CTE credentials in the United States
- Earned credentials have increased 62.7% since 2000