



S.W.A.T.

FRC
FIRST® Robotics Competition

1806

Smithville Warriors Advancing Technology

News Letter

December 2013

Technology Student Association



**“We are excited about the new opportunities that TSA provides for student leadership and real-world applications of STEM education”
-TSA Executive Board**

This year Smithville FRC Team 1806 has been implementing many new programs, including TSA, which stands for Technology Student Association. This organization’s mission is to “foster personal growth, leadership, and opportunities in technology, innovation, design and engineering”.

TSA consists of approximately 200,000 middle school and high school students. Members participate in STEM (science, technology, engineering and mathematics) related activities. TSA provides SWAT Robotics with the opportunity to expand its boundaries of student leadership.

Acting as the governing body of FRC 1806, TSA is led and run by students with the help and guidance of mentors. Students can hold the leadership positions of Presi-

dent, Vice President, Secretary, Sergeant-at-Arms, Treasurer, and Reporter. The students who currently hold these offices have been appointed by mentors and teachers.

The officers for this year are: Gabe Greenfield as President, Brandon Baas as Vice President, Camryn Hays as Secretary, Mitchell Irwin as Sergeant-at-Arms, Whitney Newman as Treasurer, and Jessica Orton as Reporter. These officers hold monthly meetings using standard parliamentary procedure, which is an organized and systematic way of conducting official meetings. For more information on TSA, visit the official website at www.tsaweb.org/

Jessica Orton

Sales Update

This past month SWAT has been working on the design for shirts to incorporate the new teams for FTC. We’ve almost finished the design and we will have shipments of the new shirts soon.

Still ongoing, is the light bulb sales, one of our biggest sales which has brought in a lot of funds for competitions.

Donuts were also another recent sale; we sold 220 dozen with a profit of \$665. Each member worked together to raise funds effectively around our school.

Emily Denny

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SWAT Senior Sponsors

Lego League: A True Success Story



Pictured top row left to right: Whitney Newman (mentor), Zach Fergen (mentor), Alex Kratofil, Jackson Brooks, Mark Krueger, Mrs. Alisa Baker (coach), Megan Krueger (mentor). Middle: Kathryn Gonzalez, Robbie Schwind, Jake Johnson. Bottom: Rachel Fortner and Josh Rich. Not pictured: JoBeth Hancock and Gavin Dunn

Smithville's Lego League Team is off to a fantastic start! At their first competition in Kearney, Missouri, the team was awarded the Project Award for an Innovative Solution. The team qualified to advance to the next competition at Union Station on January 18th. The event is free, open to the public, and runs from 9am to 5pm, so make sure to go out and support them!

The **FIRST** Lego League is a robotics program for our middle school students. Every year, a new challenge for teams to solve is produced. Teams must think of a solution that does not yet exist, create a song, skit, or some other way to present their idea in a creative way, and build as well as program a LEGO Mindstorms robot. The robot should be programmed to overcome obstacles to earn points. The day of the competition, students present their idea to a group of judges. The judges ask questions about the project afterwards. Teams then compete against each other with their robot. Whoever earns the most points within the 2 minutes and 30 seconds given will win. FLL is a fun way to learn how technology works and creatively solve real-world problems.

Kathryn Gonzalez (7th grade member of Smithville's Lego League Team)

FTC: A Time of Planning

SWAT robotics has recently implemented a FTC, or **FIRST** Tech Challenge, team into the Smithville school system. FTC is essentially a JV robotics team. This is used so that the freshmen and sophomores of SWAT can get a good opportunity to work hands-on with building a robot and gain valuable experience before the FRC build season.

Two different FTC teams have been started: a sophomore team and freshmen team. After the excitement of finding out the challenge called "Block Party", which is described as a game where teams fight to win by earning points by picking up small blocks and placing them in goals on a bar, the team started the planning process. Many good and interesting ideas came up as the team decided how to create the robot.

After receiving the kits to create the robots, the teams started to create the base and find out how to adjust their robot from there. Drivetrains have been built and the team is making good progress after a slow start.

The members of both FTC teams believe that the robot they make will be nothing short of spectacular. As of now, both teams are hard at work to create a robots that will end up being a true champions. More information will be released later concerning the progress of the FTC team in the January newsletter.

Patrick Howe



Freshman FTC Team meets to plan their robot for the FTC game Block Party.

Staley Visit



Smithville FRC Team SWAT 1806 welcomes the visiting Staley FRC Team Falcon 4959.

On the 12th of December, a few students from Staley High School decided to drop by for a visit to get some tips from SWAT on getting started with their own robotics team. Staley's coach Mrs. Clark commented "It is very overwhelming to see the kids get involved and getting to know them outside of school. So far it is going very smooth and we are learning as much as we can".

The Staley team members have big plans for the future and the team. Staley junior, Mitchell McDonald, noted "We are getting off on a strong start," McDonald plans on helping with the design and construction of Staley's robot. Overall the meeting was a fascinating and fun way help out a new robotics team and in the process both teams ended up helping each other to learn and grow regardless that soon the two teams will likely be competing against each other.

JC Seay

SPOTLIGHT: TEAM TITANIUM



Our team spotlight of the December issue is Team Titanium. With eight years of experience, they have learned over time what it takes to be a top robot in the competition. Titanium has noticed similar game elements over the years and has learned how to handle them. The main factor however, is that Titanium has developed an effective brainstorming strategy that helps conceptualize the game and how it will be played. The most important step in building a robot for Team Titanium is visualizing as accurately as possible how the game will be played at both the regional and championship level. Taking the time to build high quality prototypes while keeping an eye on how the various systems will integrate is another thing they focus on.

Team Titanium participates in numerous extra activities and charities. Just this past year, Team Titanium coordinated "Books for Honduras", collecting donations to purchase science-themed books for school children in Honduras. They have helped facilitate "Free to Breathe", a charity lung cancer walk/run, for the past five years. They've also had food drives and other collections for local social services organizations. Team members have prepared entries for engineering design contests. Each year Titanium exhibits at Oktoberfest and the State Fair, along with giving presentations at numerous civic events and corporate meetings.

The team puts together and runs six summer camps for children K-8th as well as a family carnival in the fall called "Burgers, Beakers, and Bots". They have mentored over 20 FLL teams and currently help raise funds to support 4 of these teams. They have run and assisted with numerous FLL tournaments. They started a Jr. FLL team and an FTC team and also do numerous fun activities as a team year round. Team Titanium is an exemplary team; SWAT was very fortunate to compete alongside Titanium as alliance partners twice last year. This partnership allowed both teams to win the Greater Kansas City and Oklahoma City regionals, thus enabling each team to qualify for the **FIRST** World Championships in St. Louis.

Emily Denny

SWAT Senior Tommy Mast



If you could build a robot to do any task, what would it be?
“Bring me different assortments of food.”

What do you do to get hyped before competition?
“Comic Relief.”

Do you have any nicknames and what is it?
“T \$”

What’s your favorite experience doing SWAT?

“Using problem solving skills and cooperating with my friends on a project we’re all dedicated to. I also like competing with other schools from across the world.”

What are you most excited about the upcoming season?

“I’m most excited about my senior year and being able to use what I know from my previous years”

If you could replace one part of your body to replace with a prosthetic what would it be?
“My brain.”

Josh Eklund

SWAT FRC Team 1806 can now be found on Flickr!

Flickr is a free site that allows users a free terabyte of space to upload pictures and videos.

You can view SWAT 1806’s page at <http://www.flickr.com/>

Visit our Website!

www.smithvillehighrobotics.com/

And Follow us on Twitter! @frc1806



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