NOVEMBER 16 2017
TECHHOUNDS NEWSLETTER

THE NUTS AND BOLTS

PURDUE BOILER BOT BATTLE

On Saturday November 11th, TechHOUNDS traveled to West Lafayette to compete in Purdue FIRST's Boiler Bot Battle or B3. Similar to the other preseason competitions this year, TechHOUNDS competed with multiple drive teams; one with our veteran drivers Caleb Smith and Megan Singer and the other with Josh Moore and Ryan Forrest. With only five qualification matches our drive teams switched off every match, ending qualifications with 2 wins, 3 losses and a rank of 22nd. We were then picked to be on the 7th seeded alliance with our captain Plainfield Red Pride Robotics FRC 3487, Harrison Boiler Robotics FRC 1747, and Crown Point Robodogs FRC 2171. Our alliance played well with our first elimination match resulting in a win, but there were communication problems with 3487. We were able to continue with 2171 taking the place of 3487. The second match was a loss meaning the third match we were playing would be a tiebreaker. Team 3487 was fixed and ready for match three. Seconds before the match started TechHOUNDS found that our pneumatics were not charged, so we quickly tethered on the field and were soon all set to go. Our alliance changed the strategy but we were relying on turning all three rotors and completing three climbs, but by 30 seconds left we still only had two rotors. At 20 seconds only 1 bot was climbing, at 10 seconds 2 bots were up and at the very last second all three bots were up. However, it was not enough to win. We had just barely lost our last match. At the end of the day even though we came up short, we knew that we tried our hardest.

TechHOUNDS had started packing up the pit getting ready for the long drive home when we were called up to receive the Quality Control Award for our innovative robot design and mechanical consistency. All members ran to grab our award and get a high-five from all the judges. Ultimately we learned a substantial amount on how to better our team for the upcoming season.

UPCOMING EVENTS

November 17:
LATENIGHTER
December 7:
Sponsors Due
December 17:
Parent Night
January 6:
KICKOFF

CONTENTS

CONTACT US @

techhounds868@gmail.com
or visit techhounds.com

AND FOLLOW US ON

@frc868
@techhounds868

WOMEN IN TECHNOLOGY WORKSHOP

The Women in Technology Workshop - commonly abbreviated as WTW - occurred this past month on Saturday, November 4th. WTW is a workshop TechHOUNDS has created to inspire young girls to pursue STEM fields, despite females being a minority in those careers. This year TechHOUNDS hosted the third annual day-long event.

TechHOUNDS decided to mix it up a little this year. We have many goals for WTW, starting with just getting girls interested in STEM to show up. However, TechHOUNDS believe that the most important thing WTW can do is inspire them to stick with STEM fields. We decided to approach this goal in two ways. Our first approach was making sure that each and every girl was impacted by our event. To do that our planning committee decided to double up on volunteers and have each girl go around the stations with a crew leader. This gave TechHOUNDS the opportunity to get to know the participants and give them meaningful advice and a friendly face on the team for future years. Our second approach to reach our new goal of sustainability was to plan new and creative stations.

WTW consisted of four stations featuring Chemistry experiments, Physics activities, CAD exploration, and Lego Mindstorm robotics kit construction. The day was kicked off with three inspirational talks from former Mayor of Indianapolis Greg Ballard, founder and CEO of Netlogx and Women in Hi Tech President Audrey Taylor, and Women in Hi Tech Communications Chair Lori Boyer. After the speakers had wrapped up, the 55 participants found their group leaders and headed off to their first of four STEM stations.

For most Physics was the favorite, where not only did the girls learn about awesome and interesting physics properties but they also got to construct their own mini brush bots. Afterwards, the girls were able to build a small catapult out of popsicle sticks and launch paint onto a canvas that would later be featured in the event photo.

The toughest station allowed students to work with CAD (Computer Aided Design) software. CAD software is commonly used when designing things in the workforce. Participants were able to create a 3D design using CAD, then physically laser-cut their design into a square of acrylic.

Another station featured was Chemistry, including the tasty experiment ice cream in a bag. Participants were able to make ice cream out of just milk, sugar, vanilla, ice, a touch of salt, and a lot of shaking.

The final station featured at this year's WTW was Lego Mindstorms. The Lego Mindstorm kits are similar to VEX or other engineering kits. They are equipped with a variety of parts that can be placed together to create a mini robot that the user can then program and test. The TechHOUNDS WTW objective was to move the bot forward, ring a bell and return to the start using a basic programming language consisting of dragging and dropping commands.

Thanks to those who came to speak, volunteer, or participate at the third annual Women in Technology Workshop, and we look forward to seeing you again next year!

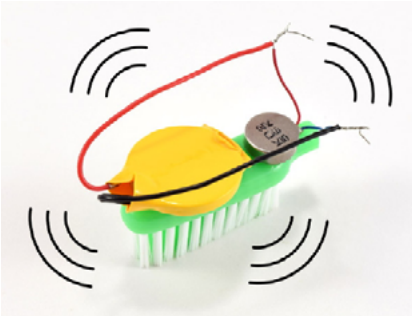
MINI BRUSH BOTS

MATERIALS

- ☐ Coin cell battery
- ☐ Vibration motor
- ☐ Toothbrush head
- ☐ Double-sided foam tape
- ☐ Scissors

INSTRUCTIONS

Ask an adult to help you cut the head off a toothbrush using a strong pair of scissors or pliers.
Attach the motor to one side of the brush, then strip the wires.
Attach the battery to the other side of the brush, then wrap each wire around its counterpart.
As soon as the circut is completed, the bot should vibrate.



TROUBLESHOOTING

- Do not let the exposed metal parts of the red and black wires touch each other directly. This will drain the battery very quickly.
- If your robot stops moving suddenly, check to make sure that one or both sets of wires did not come loose. If so tightly twist the wires back together.
- To turn your bristlebot off, just untwist one set of wires (you do not need to disconnect both).

HOME MADE ICE CREAM

MATERIALS

- ☐ ½ cup of milk
- ☐ ¼ cup of sugar
- ☐ ¼ teaspoon of vanilla
- ☐ Scoop of Ice
- ☐ ¼ cup of Rock salt
- ☐ 2 Ziploc bags

INSTRUCTIONS

Put on your safety goggles.
Mix your milk, sugar, and vanilla in a ziploc bag.
Put your ice, rock salt, and your sealed first bag in your other bag.
Shake/knead until your ice cream is frozen.
Get some toppings, and enjoy!

NOTE: Make sure you seal your bags fully to avoid getting salty ice cream!

MORE INFO

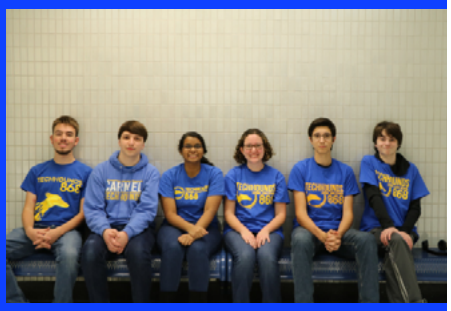
For more information, pictures, and videos from the event you can visit www.techhounds.com, or our social media listed on the first page.

DIVISION UPDATES

ROBOT OPERATIONS

"We've been working on our minibots. Most if not all of the groups are fabricating parts for their robots. About 90% of the groups have a drive train in completion and parts are being built now. We will be done by the end of preseason."
-Derek Fronek

"We've been soldering the controls for the vex robots. We are trying to build the smallest board possible with as many motors as we can fit on it. Also, we've been training our rookies."
-Megan Singer



ELECTRICAL

CONSTRUCTION

"We are getting the preseason game field ready. We are going to either build a new electrical cart or fix the old one. Also, we are building a new cart to better transport the robot."
-Marcus Ford

"Public Relations has been busy redesigning, innovating and getting ready for the upcoming season. We have worked on a new name tag design as well as multiple videos for our YouTube page."
-Bryce Castle

PUBLIC RELATIONS

INFORMATION TECHNOLOGY

" The veterans are working on making a new scouting system to replace last year's. The rookies are making a practice scouting system using paper football as the model game."
-Austin Hartman

"Some of the team is working on Hammerhead for speed control for shooting and driving. Another group is working on vision using Aurasma Recon. Our younger members are working on spinning motors and looking at measuring speed."
-Caleb Smith

PROGRAMMING

THANK YOU TO OUR SPONORS

PLEASE CONTACT TECHHOUNDSSPONSORS@GMAIL.COM

TO BECOME A SPONSOR FOR THE 2017-18 SEASON

SIGNATURE $6000+

Carmel High School

DIAMOND

GOLD $1000+

Bastian
SMC USA
Lentz Independent Consulting
Chairs of a Different Color

SILVER

Flexware Innovation Inc.

BRONZE UP TO $500

Stribling Media
Brandon Tiek
Allegiant
DIVsys
Kiwanis
HWC Engineering
Edward Jones
Holscher Products
arcDesign
Cleo Legal
Hoosier Gasket Corporation
Integrated Investment Strategies, Inc.
Center for Diagnostic Imaging
Tony LaMear for US Congress, (IN 5th)
Williams Comfort Air
Fusion Technology Partners
The Great Frame Up
Campbell Investments