



THE NUTS AND BOLTS

UPCOMING EVENTS

February 20:

Stop Build Day

March 24 & 25:

Plainfield District

March 29 & 30:

Tippecanoe District

April 13 & 14:

State Championship

OUTREACH IS OUTSTANDING!

In the past few years TechHOUNDS has been expanding. Our team started out as a robotics team, focusing primarily on engineering design and experience. Recently TechHOUNDS has become more than just robotics. TechHOUNDS now hosts and volunteers at numerous demonstrations, workshops and other engineering-related events. Since June of 2017 TechHOUNDS has planned and attended 13 demonstrations and workshops.

This year TechHOUNDS has partnered with the Carmel Clay Public Library on their STEM initiatives. TechHOUNDS has assisted in planning many workshops where middle schoolers can learn to design, CAD, and construct different projects. The most recent workshop featured air-pressured rockets. Outreach Coordinator and Electrical member Priya Una describes her experience, "We taught the engineering design process to middle school students by challenging them to design, CAD and build their own paper rockets. We ended the event by launching the rockets outside and discussing real-life applications of the design process."

Another recent outreach addition includes our Senior Tech Help Workshops, where team members visit the new Carmel Senior Living home to assist the elderly with anything they may need. Many of the elderly have been amazed with what we have shown them starting with just moving apps around, to transferring all of their files and programs to a new computer. Since the start of these workshops we have helped create numerous social media accounts and taught basic programming to seniors in our community.

Outreach is an incredible opportunity to step out of your comfort zone and help others find theirs.

CONTENTS

- 1 Outreach
- 2 The 2018 FRC Game
- 3 Meet Our Team
- 4 Division Updates
- 5 SPONSORS

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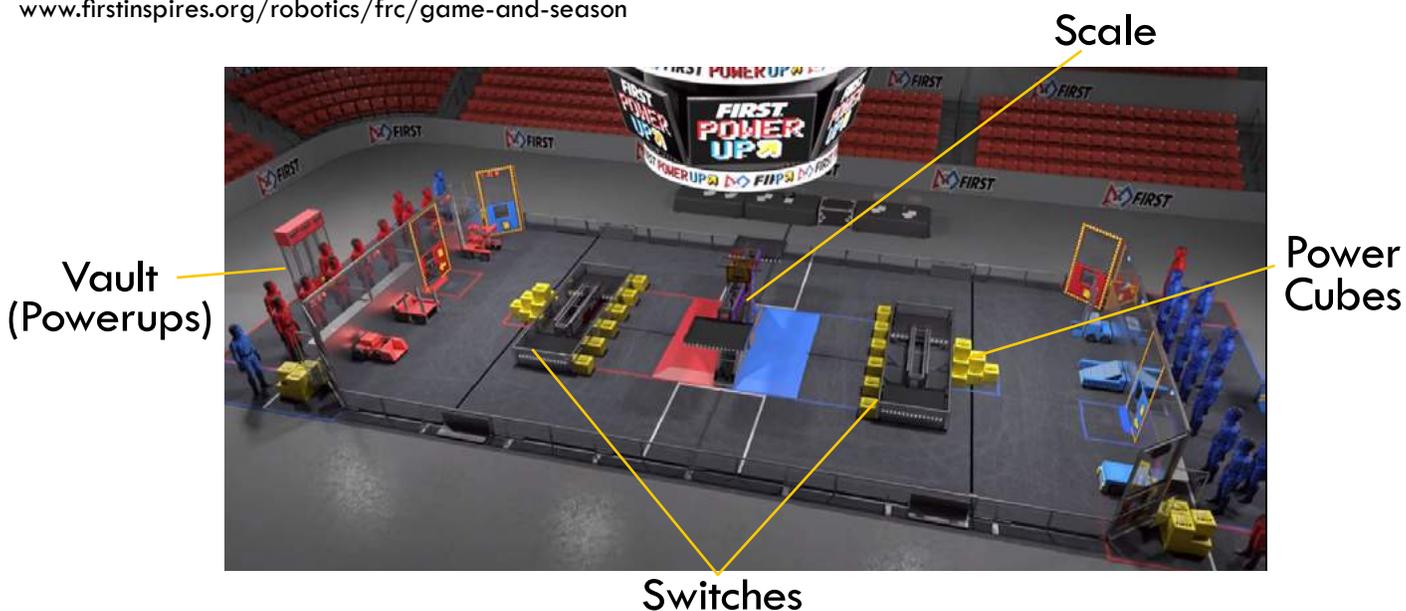
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ANOTHER YEAR, ANOTHER GAME

Thousands of teams crowded around a screen on January 6th, eagerly awaiting the reveal of this year's FIRST Robotics Competition game "POWER UP." TechHOUNDS kickoff started off with a demonstration of the new pit display. Students and parents gathered, spirit wear was sold, and everyone was ecstatic to watch the livestream. As soon as it ended, ideas and strategies filled the room for the upcoming build season.

This year's theme is centered around retro arcade machines and an 8-bit art style. The goal is simple: rack up the most points by keeping the switches and scale balanced on your alliance's side for as long as possible. Each alliance has their own switch and both alliances compete for ownership of the middle scale. To control a switch or scale teams place power cubes or yellow crates on their side of the scale. Every second the team's switch is tilted in their favor, that alliance gains a point. This game has already been compared to the 2015 game Recycle Rush, however it is a bit more complex than its predecessor. The center scale requires the robot to reach over six feet high to deposit the power cube. The robot drivers can also choose to bring the cubes back to them to activate power ups: Force, Boost, and Levitate. Force secures your team's switch, the central scale, or both for ten seconds (dependent on how many power cubes you use to activate the powerup). Boost functions similarly, but allows double the points for as long as it's active. The last available powerup is Levitate, which can be used to guarantee a free climb for one of the three robots on an alliance. Climbing is an additional way for alliances to gain some points at the end of a match by scaling the central structure. The match is divided into fifteen seconds of autonomous control in which the robots need to control themselves, followed by the two minute fifteen second teleoperated period where the drivers can strategize and maneuver their robots across the field. At the end of the match, the alliance with the most points wins the match. For more information about FIRST or to watch the 2018 game animation, visit www.firstinspires.org/robotics/frc/game-and-season



MEET OUR TEAM

A WEEKLY SHOWCASE OF THE MEMBERS & MENTORS WHO MAKE OUR TEAM TICK

ROOKIE



TECHHOUNDS
SPENCER JOHNSON

Why did you join?

I joined because I have always liked building things as a kid. I also was a part of VEX in middle school and I want to become an engineer; I thought this would be a great opportunity to see what being one is like.

What have you liked about the team so far?

The friendliness as well as the fun they have while working hard.

How did you hear about TechHOUNDS?

School announcements and from my middle school VEX robotics instructor.

What do you do on the team and what does that entail?

I help with the Public Relations division this year. My role is support and inspiration driven. I give suggestions regarding the planning of newsletters and social media as well as give input when designing graphic images for apparel and cups. I also help with travel planning for the drive team during competition season and meal/snack donations.

How long have you been a mentor and why did you become one?

I have been a mentor for 2 years. I love to be around these smart and motivated students, it keeps me on my toes!

What do you hope to teach the students?

I hope students learn that a positive outlook and drive can overcome any challenge that comes their way.

MENTOR



MRS. FRONCK

4TH YEAR



ETHAN COUNEN

What has TechHOUNDS taught you?

I came in knowing absolutely nothing about coding websites. After teaching myself and many hours of listening to mentors and leaders, I now know how to code websites and am now in charge of creating the new site.

What's your favorite part of TechHOUNDS?

My favorite part of TechHOUNDS is the people. I have done some amazing things through TechHOUNDS but it would not be the same without those I share my challenges with.

What is one thing you wish you knew as a rookie?

One thing I wish I knew as a rookie was don't be afraid to fail. As a veteran I still fail about as often as I did as a rookie, but now I know how to better learn from those mistakes.

DIVISION UPDATES



ROBOT OPERATIONS

“Robot ops has broken down the game into different essential elements of play, and has created and tested multiple prototypes for different aspects of the game. We are on track to make a decision on which strategy to pursue.”
-Derek Fronck

“Electrical has been working on wiring the control system using CAD software, controlling LEDs for various projects, and assembling a control system for our prototype testing robot.”
-Megan Singer



ELECTRICAL



CONSTRUCTION

“We have finished cutting all of the pieces of the practice field and have started to assemble all of the components. We have also finished the platform and the chute.”
-Marcus Ford

“PR is ecstatic for the game theme this year. We will be incorporating the pixelated retro design with a 2018 twist for our themed designs. We have already begun work on updating the newsletter, spirit wear and locker designs.”
-Bryce Castle



PUBLIC RELATIONS



INFORMATION TECHNOLOGIES

“One of our groups is working with a veteran to create our new website. The other group is working with me and we’ve created the baseline for the scouting system. Then rest of the veterans are finishing the sign in system.”
-Austin Hartman

“Programming has been focusing on robot code, and has tested different control schemes & automatic gear shifting. We have also experimented with a new autonomous system called motion profiling which looks promising.”
-Caleb Smith



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