

# Team Neutrino

FIRST Robotics Team #3928

## Chairman's Executive Summary

2016

1. *Briefly describe the impact of the FIRST program on team participants with special emphasis on the 2015/2016 year and the preceding two to five years.*

3928 Team Neutrino members gain real world skills and experience while on the team, providing higher ed and career advancement opportunities.

- 86% pursue STEM as a career
- Team grew from 9 to 43 since founding
- Through FRC, Captain Timothy took a job implementing the Ames 1:1 laptop program
- 3928 inspired member Tianxin to pursue an internship in physics creating a program to read info and create a graphical display
- Alum Sarah gained a Blue Origin internship immediately post-high school

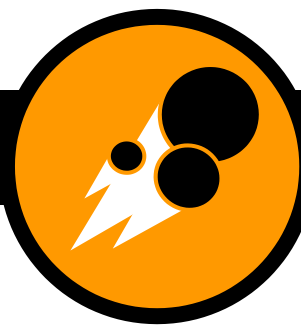
2. *Describe the impact of the FIRST program on your community with special emphasis on the 2015/2016 year and the preceding two to five years*

From Fall 2011-Spring 2015, Team Neutrino

- Volunteered for 1,700+ hours
- Impacted 210,000+ people
- Mentored 6 FLL teams
- Started and mentored 4 Jr FLL teams, 3 all girls
- Encouraged 13500+ girls in STEM
- Ensured availability of FIRST to all K-12 students in Ames

This year, Team Neutrino

- Volunteered for 2300+ hours
- Impacted 138,000+ people



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- Mentored 8 FLL teams
- Started 7 Jr FLL teams; mentored 11
- Encouraged 4600+ girls in STEM
- Enriched 15 partnerships in the Story County community

*3. Describe the team's innovative or creative method to spread the FIRST message.*

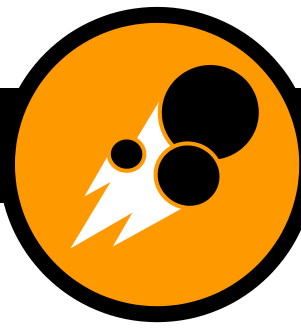
Since 2012, 3928 has taught over 120 middle schoolers during their annual Super Summer Camp. Over 2 weeks, the students learn to build and program a robot and are challenged to complete the previous year's FLL missions. They taught 2 maker camps this summer for elementary students. Students worked on 3928's challenges and learned about circuits, coding, robots, and 3D drafting and printing. The curriculums for the Super Summer camp and the maker camp are published on the team website.

*4. Describe examples of how your team members act as role models and inspire characteristics for other FIRST team members to emulate.*

3928 prides themselves on leading by and learning from examples. 3928 is more than just a team; the members form lasting relationships, and their friendly energy creates an enthusiastic atmosphere while still inspiring dedication and determination to achieve their goals. The rookie FRC team in Grinnell is emulating these characteristics this year. 3928's co-captains and 12 sub-team managers work with new members to help them as they determine their specialty and prepare to become future leaders.

*5. Describe the team's initiatives to help start or form other FRC teams.*

In the 2012 offseason, Team Neutrino traveled to Des Moines, IA to share their rookie robot at a local high school, inspiring them to start an FRC team. 3928 then mentored the rookie year of the 6th Iowan FRC team 4646 ASAP,



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ensuring their sustainability. Since then, 3928 has pursued their own expansion by creating a solid base of FIRST in Ames and planning the growth of FRC in the state. They recently began mentoring the new FRC team in Grinnell, Iowa primarily over video calls and email.

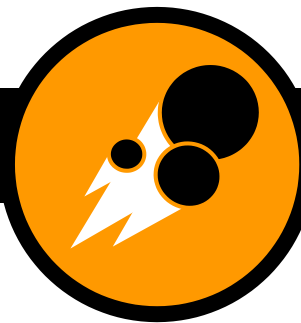
*6. Describe the team's initiatives to help start or form other FIRST teams including Jr.FLL, FLL, & FTC.*

3928 started 3 all-girls FLL Jr. teams at Edwards Elementary last spring, completing the FIRST progression of programs in Ames. This year, 3928 expanded the FLL Jr. program to another elementary school, totalling 11 teams & 500+ mentoring hours. To allow previous FLL Jr. students to continue in FIRST, they started 2 FLL teams at Edwards this fall. 3928 also started an FLL team in Ballard in 2014 comprised of disadvantaged students. 3928 members currently mentor every team they have started.

*7. Describe the team's initiatives on assisting other FIRST teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the FIRST program.*

3928 recognizes the importance of an extended period of time in FIRST. The team worked with other FRC/FTC teams to present the next level of FIRST to younger students.

- Science Center of Iowa robotics day with FRC 4646 & FTC 5126
- Iowa State Fair with FRC 167, 967, 4646 & 3 FTC teams
- SCI Mini Maker Faires with FRC 4646 & FTC 5126
- Assisted an FLL team from Walnut, IA
- 600+ hours of FLL event volunteering
- Iowa FLL State Championship demos & presentations with FRC 525



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*8. Describe how your team works with other FIRST teams to serve as mentors to younger or less experienced FIRST teams including Jr.FLL, FLL, FTC, & FRC teams.*

Team Neutrino is proud that they mentor all 4 levels of FIRST.

- Over 900+ man-hours were spent mentoring FLL and FLL Jr. teams since August.
- They developed an FLL mentoring program at Ames Middle School and 2 elementaries and coached a team in Ballard. 3/8 teams won awards & 2 advanced to state.
- The yearly FLL scrimmage allows teams to practice robot rounds & judging. 26 teams have participated in this 5-year event.
- Team Neutrino mentors a third-year FTC team and a rookie FRC team.

*9. Describe your Corporate/University Sponsors.*

## Diamond Level

John Deere  
Danfoss  
Monsanto Fund

## Platinum Level

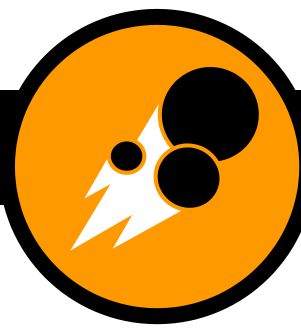
CIT Signature Transportation  
Quality Manufacturing  
3M

## Gold Level

City of Ames Electric Services

## Silver Level

Iowa 4-H Foundation  
Emerson Process Management



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Interstate All Battery Center

Honorable Mention

Jimmy John's  
Panera

Operations Partners

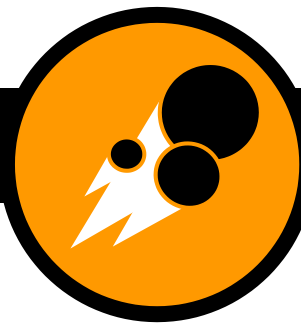
Story County 4-H  
Iowa State University College of Engineering  
Iowa State University Robotics Club  
Boyd Lab

*10. Describe the strength of your partnership with your sponsors with special emphasis on the 2014/2015 year and the preceding two to five years.*

John Deere is 3928's most dedicated sponsor. They assist the team monetarily, and the lead mentor is a John Deere employee. Also, Quality Manufacturing laser cuts parts and provides tours of their facility so 3928 can observe a real-world industry setting. 3928 keeps a positive relationship with sponsors through regular contact via weekly newsletters, visits, thank-you letters, and website & social media updates. Sponsor logos are displayed on the robot, in the pit, and on promotional materials.

*11. Describe how your team would explain what FIRST is to someone who has never heard of it.*

FIRST is designed to inspire K-12 students in the advancement of STEM. It's built around a culture of encouraging youth to pursue and respect science and technology. Through FIRST, students develop leadership, communication, technical, teamwork, and time management skills imperative in an industry setting. FIRST prepares its participants for college



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and a career. The unparalleled energy at a FIRST event rivals that of a pro sports competition.

*12. Briefly describe other matters of interest to the FIRST judges, if any.*

3928 has a lasting impact on everyone they reach, from team members and mentors to their local and FIRST community. The team is memorable for their tenacity, communication, and cohesion. Students are better prepared for life because of FIRST, as they've been able to experience firsthand failures, successes, and consequences, and learn how to adapt to them. FIRST is not just a robotics competition, it's a pathway to inspire the next generation of innovators.