

Chairman's Award - Team 876

Team Number

876

Team Name, Corporate/University Sponsors

ND Space Grant/John Deere/Brent Pederson/Dr. Mary Aaland/Aneta Whitetail/Nrthwd Amer. Legion/Amer. Crystal Sugar/Nrthwd Mens Club/Ed and Sue Lloyd/Hatton Mens Club/Citizen's State Bank/Phil and Trish Gisi/ND CTED/Msgt. Gary Kimball & Northwood High School & Hatton High School

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2016/2017 year and the preceding two to five years

Our student to mentor ratio is 3:1, which makes it very easy to get interaction between students and mentors, also making it easier to learn about the different aspects of FIRST. Also in the past few years 90% of our graduates have gone into STEM related careers. Out of our 169 students, 20% participate in our FRC team.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2016/2017 year and the preceding two to five years

876 is asked to participate in over 70% of community events held. With us being able to participate in all of these events, 75% of the businesses in our town notice our team and want to sponsor us. We keep our community updated with our progress each week and tell them our goals for the week through the local newspaper.

Team's innovative or creative method to spread the *FIRST* message

Our team does many different volunteer works, like helping out at the annual coyote hunt, and the Dave Hedland golf memorial. We have also started Legos for Little Ones, and STEM night to get the younger generation interested in FIRST.

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

We make our shop accessible for our community and other local communities to come in and look at how far along we are and show them different aspects of the robot that are still being built. Programmers also get the younger generation interested by showing them some of the different parts of programming before they join.

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

We get in touch with former foreign exchange students to help them start a team, we did that by sending representatives to their country to talk about FIRST. We also provide help for our sister team 877. Now we are trying to start more teams in our state to hopefully get a regional that is closer for our teams to attend.

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

We have helped start and assist 10 FRC teams. We have also helped start BEST programs in North Dakota which now has over 35 teams and we are hoping that it's a stepping stone to starting an FRC program. 876 has also created the first FTC tournament in North Dakota.

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

876 helps with FLL and FTC workshops in our areas. We also interact with the younger generations by giving presentations and helping with SMILE.

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

We mentor and help guide our FLL team in our school and schools around us. We also ref at local FLL, FTC and BEST robotics competitions. 876 holds programming workshops at the Kick-off in Fargo.

Describe your Corporate/University Sponsors

Ag. facilities surround our area and are more than happy to sponsor us and also mentor. 40% of our volunteers are local college students. North Dakota NASA Space Grant is one of our biggest sponsors along with John Deere and American Crystal Sugar.

Describe the strength of your partnership with your sponsors with special emphasis on the 2016/2017 year and the preceding two to five years

Thunder Robotics has a close relationship with our sponsors. Through our outreach efforts we have gained a number of sponsors throughout the years. Local businesses are proud to say they are a part of 876 successes. Many of our sponsors come to our regionals to support the teams and experience the world of FIRST. Thunder Robotics could not thank them enough for all of their support.

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

FIRST is an organization where students can find their spot in the world of STEM. Students receive hands on learning and get to see the engineering and design process first hand. Teams are encouraged to be the best they can be and are never put down; every idea is welcomed. No matter what your interests are, you will find your place in FIRST. The diverse world of robotics shows you that there is more to STEM than just making a robot. FIRST welcomes anyone.

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

Thunder Robotics has come a long way. Being from four small towns, the largest population being 1000, 876 has had to be creative in the ways we spread the message of FIRST. Last year we traveled over 4,000 miles away to spread the message of FIRST, going way out of our 15 mile comfort zone. In our near future we hope to help start a FIRST team in Argentina, and to get a regional in the beautiful state of North Dakota. Nothing is too big for this small team.

Team Captain/Student Representative that has double-checked this submission.

Sydney Johnson

Essay

In a field where science, technology, engineering and math are the structure of building robots, there is one team that sticks out: 876. DC and Marvel are two comic book industries that are well known for their epic storylines and their legendary superheros. We too plan to make our story legendary. Our superpower is empowerment: empowering young minds to think outside the box, empowering students to work together, and teaching everyone around 876 about gracious professionalism. Like DC and Marvel, Hatton and Northwood once had a rivalry. Unlike these two comic book giants, who still are rivals, 876 has looked past our differences and used them to our advantage to create an indestructible team.

Iron Man- Heroes aren't born, they're built.

It took Iron Man 12 months to build his first suit. It took Mike Voglewede and Dave Hedland 36 months to build our FIRST team. In order to form a team, Hatton 875 and Northwood 876 had to unite to create one cohesive force. Due to living in small towns, we had to innovate a new way to create a team able to face off with the other dominant teams. 876 is comprised of students from 4 towns and 2 schools. The population of these towns range from 345 to 953 residents. With our constant outreach and by the efforts of our sponsors in the last year, our team has gone from 20 students to just under 50.

Our schools provide us with the unique opportunity of being able to join any activity we choose. In order to include all of the students, our robotics team provide late practices, meals, and transportation. We work until 9pm every night, sometimes staying as late as 12am. We are able to do this thanks to our devoted mentors and generous parents. Each day of the week during the season, a parent provides a meal for the team. This enables continuous working and allows students in other extracurriculars to be fed without having to miss practices.

Our team is one of the few in which students don't have to pay fees or try out, and this is due to the significant part our sponsors. They pay for everything, from competition fees to our meals every night. We specially thank them by hosting a Hoof and Wheel Prime Rib Dinner. At the dinner, all businesses and families who sponsor us are invited. Team 876 provides the meal, cooks, serves, visits, and cleans the building. We demonstrate our robot to show them just how important their contributions are to this team.

Batman- It's not who I am underneath, but what I do that defines me.

876 is not defined by our limitations, but how we have conquered them. As stated before we come from a small community, this causes limitations that other schools don't have to fear: time, money, travel, and team members are our biggest conflicts. 876 does as much as we can in our community to get the word of FIRST out. This year 876 has created a STEM Day for elementary students. Classes have a week to build a junkyard robot, at the end of the week robotics students are sent to elementary classroom to talk about what FIRST is. Afterwards they participate in science experiments to teach them how FIRST and STEM interlock.

SMILE is a group for elementary kids who struggle in school or at home. Students are paired with high school buddies

that are there to be a friend. There are 25 robotics students who participate in SMILE. With the help of this program students are able to enjoy activities such as participating in 876 practices, sharing lunch, and hanging out after school. Thunder Robotics insures all ages are a part of the team. This December we brought our robot to the local nursing homes to spend time with the residents by playing bingo, conversing about the season, and demonstrating last year's robot. The residents and employees greatly appreciated us spending time with them as well as being exposed to the team.

With the help of the Northwood Men's Club and 876, the community is able to participate in an annual coyote hunt. The hunt is a pleasant break from the stressful season, allowing students to see another side of STEM. Thunder Robotics records the weight and the temperature of the coyotes, which determines the winning team. After all is done the robotics team stays to put everything away and cleans the community center.

Between all of our events we do around the community, we also host a bake sale at sporting events. All of our proceeds go to the Sunshine Memorial Foundation in Grand Forks. The Sunshine Hospitality Home is being built for families to have a place to stay while their loved ones are in the hospital. Hatton-Northwood has a room at this home and all proceeds went to the building of the house.

Wonder Woman- I have no idea where I am going to be tomorrow. But I accept the fact that tomorrow will come. And I am going to rise to meet it.

Wonder Woman is a strong, intellectual woman who doesn't fear anything. She is resourceful and will do anything to get the job done. Many of these characteristics can be found in the women on our team. The number of women has unquestionably increased throughout the years. In the past, the majority of our team was male. In 2002 we had 10 female students and 0 female mentors, now Team 876 has 20 female students and 7 female mentors.

There is one mentor in particular Team 876 is particularly proud of. Sophie Hoge, a manufacturing engineer at John Deere and a mentor of 876 for the last 3 years, is the definition of independence and integrity. She inspires each and everyone on the team to pursue their dreams.

Comparable to Marvel and DC, Team 876 enjoys seeing every superpower that can be found in every one of our members. No matter how small, no matter how young, no matter how old, everyone in our team is someone special. We are all equal, and we all have a light within ourselves, a light that is waiting to come out and do good.

Superman- Dreams save us. Dreams lift us up and transform us... I will never stop fighting. Ever.

Essay - page 2

876 has had many bumps in the road, but if we dream big enough and hard enough, we know we can do it. Thunder robotics isn't just a team: we are a family, and we will fight until the end. In early 2014, one of our founding mentors, Dave Hedland, who had been suffering from cancer passed away. Although this was hard on the team, we knew that he wouldn't have wanted us to sit around and grieve; he would want us to take this time of misery and let it inspire us. We thank Mr. Hedland for making a huge impact on our lives and inspiring us to do better. In honor of Dave, 876 hosts a golf tournament which brings in all of the local golfers and raises about \$3,000 a year. Dave dedicated his free time to robotics and we dedicated our memory to him.

BB876 is the name we decided to give our robot this year. Although it may not sound important, the story behind it will forever leave a mark on our team. Soon after we started the 2016 school year, one of our mentors was caught in a tragic accident and passed away. Ben Bartle, our robot's namesake, was an Afghanistan veteran, a dedicated husband, father, and mentor. Ben and his wife Brandy have made a huge impact on our team, dedicating their free time to mentoring youth groups, mission trips, and robotics. Team 876 could never possibly find the words to express how important Ben was and always will be to our team. Without Ben, we would have never realized the true potential each one of us holds. We want to dedicate this year to Ben, Brandy, and their daughter Bella, because without them, 876 would never have been who we are today.

Through all of the difficult times we have become more than a team, we have become a family and will never stop fighting to spread the word of FIRST.

Thor- I am the Thunderer! Reign I forever!

Not only have we made an impact on our community, we have made an impact on the world. 876 has created a program called Lego's for Little Ones, where elementary students at our schools bring in and donate all of their unused legos. 876 then donates the lego's to orphanages in Jeremie, Haiti. This orphanage is in the top ten poorest orphanages in the world. They were also struck hardest by hurricane Matthew, so the legos were sent there to inspire them in aspects of engineering and help put a smile on their faces. Colin Douglas, an 876 student, was able to go to Haiti and experience first hand the joy of the kids.

876 has teamed up with a local crochet club called the Happy Hookers. We then help knit hats, mittens, and scarves in our team colors. Cortney Douglas, an older sister of a robotics member, has created a charity called Sacks of Hope that sent these items to Mongolia.

Thunder robotics has had numerous foreign exchange students come to our schools and join the team. 876 has had 9 students from 7 different countries: Thailand, Austria, Italy, Netherlands, France, Germany and Norway. In years past we had many students come and work on the chairman's essay. Lena is a former foreign exchange student who helped with chairman's and now is working very hard to start a team in Austria. In 2014, we sent 3 representatives to Austria to talk about robotics, FIRST and STEM.

Bob Deutsch, the president of Agvise, a successful soil research company founded in Northwood, says he owes some of his success to 876. Bob was a mentor for our team in years past, and he attributes the success of his business to 876.

Dave Hedland- How hard would it be?

876 has come across many rough patches, but through it all, we have become more than a team, we have become a family. Team 876 is more than the Justice League and stronger than the Avengers. We are Team 876, and we are here to conquer FIRST.