

# Team Handbook 2019-2020





Welcome to *FIRST* Robotics Team 2930, the Sonic Squirrels, from Snohomish School District, Washington. Team 2930's sponsors include Microsoft, Boeing, Leidos, *FIRST* WA, Philips Healthcare, the Office of the Superintendent of Public Instruction (OSPI), Glacier Peak High School ASB, Electro Impact, Aerojet Rocketdyne, Solid Works, F5 Networks, the Snohomish Education Foundation.

### **TEAM MISSION STATEMENT**

Have Fun! Build Fun! Be Fun!

Have Fun: have fun learning, teaching, experiencing.

Build Fun: build up other teams and a good working environment in which we build a robot as well as many other aspects of our team.

Be Fun: be fun and spirited people.

### **TEAM 2930 GOALS**

-Fully understand and exemplify the concepts of Gracious Professionalism™, Coopertition™, and other *FIRST* principles. Gracious Professionalism is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. Coopertition is defined by displaying unqualified kindness and respect in the face of fierce competition.

-Foster a zeal to give back to the community.

-Develop engineering, business, problem solving, communications, and teamwork skills working together to achieve our team and *FIRST* missions.

-Build confidence in communications and leadership by engaging with the community through the world of *FIRST* Robotics and STEM.

-Actively encourage and support the growth of all *FIRST* programs.

### **TEAM HISTORY**

FRC Team 2930 was founded in 2008 by Kevin Winter, a teacher at Snohomish High School. Our team followed him to the new Glacier Peak High School, and we competed for the first time in the 2009 season, playing the game 'Lunacy'. Jin Hayashi, another teacher at Glacier Peak, joined in 2010 and became our main faculty advisor for many years to come, replacing Kevin Winter before the 2011 season.

We were known in our first years as "Roboshi", then switched to using the name "TaterBotz". In 2014, we underwent a major rebranding to appeal to a broad demographic and allow us to better accomplish the *FIRST* mission at our outreach events. Our students decided on the name "Sonic Squirrels", and our redesigned logo represented the team's approachable yet slightly edgy character. We became an outreach-oriented team and began to compete for the major community involvement awards such as the Imagery Award, Engineering Inspiration Award, and Chairman's Award. During these years our main mentors were Lori and Steve Hittle; since 2016 they have moved on to mentor some of the other teams in the Everett area.

Our sponsorship and mentorship have changed over the years. In our earlier years our largest sponsor was Boeing, as our lead engineering mentor Jeff Austin was a Boeing engineer. We spent most of our years building in generous mentors' garages, including those belonging to Jeff Austin as well as the Hittles. Our 2014 rebranding allowed us to better advertise ourselves to potential mentors and sponsors, and after that season we picked up new mentors from Microsoft and Boeing.

2015 was a breakout year for us, as we won the Chairman's and Engineering Inspiration awards for the first time during our district events and qualified for the District Championship and World Championship for the first time. We won the Pacific Northwest District Championship with our alliance partners Team 1983 Skunkworks and Team 955 CV Robotics, and also qualified for the World Championship as a recipient of the Engineering Inspiration Award. We went on to win the Imagery Award in our division at Worlds, competing against 150 teams from around the globe.

2016 was a year of change for us, as we transitioned to meeting and building at Glacier Peak High School. Sean Wilson, a new faculty advisor, offered his classroom as a team meeting space, and Jin Hayashi moved rooms to be next to the school's machine shop. We now use this machine shop for woodworking and metalworking, with final assembly in Mr. Hayashi's classroom.

Newer faces have entered the picture since then, with Leidos engineer Joshua Myers stepping into the lead engineering mentor position, Melanie Limtiaco beginning her current role as lead operations mentor, and Sean Wilson transitioning into his role as lead faculty advisor. The need for a district-wide team became apparent, students from Snohomish High School's FRC team, 5495 The Aluminati, banded with the Sonic Squirrels to create a Snohomish School District Team under the Squirrels' name. The 2018 season saw a year full of spirit awards and the creation of the most contagious cheer in the Pacific North West, ending at the district championships. The 2020 season will be our twelfth season. With *FIRST* continuing to grow as an organization, and with the great support our team gets from the surrounding community, we can expect many more great seasons to come.

## INTRODUCTION

Welcome to *FIRST* (For Inspiration and Recognition of Science and Technology), the world's preeminent robotics competition. *FIRST* was started in 1989 by inventor Dean Kamen and MIT professor Woodie Flowers. The *FIRST* mission is to inspire young people to become science and technology leaders by engaging them in exciting mentor-based programs that build science, engineering, and technology skills that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership. Through *FIRST*, students can learn engineering and business skills while learning and competing intensely, but treating one another with respect and kindness in the process – this is called “Gracious Professionalism.” *FIRST* is a family that forges life-long friendships. *FIRST* is not just about robots; it's about ideas and people, too.

*FIRST* redefines “Winning.” *FIRST* Teams are rewarded for excellence in design, demonstrated team spirit, gracious professionalism, maturity, and ability to overcome obstacles. Scoring the most points is a secondary goal. “Winning” means learning, being inspired, and building partnerships that last.

## *FIRST* PROGRAMS

*FIRST* provides programs for grades K-12.

*FIRST* LEGO League Junior (FLL Jr.) is for ages 6-9, and grades K-3. On FLL Jr. teams, students build LEGO models to demonstrate solutions to themed challenges, and present their solutions in FLL Jr. Expos.

*FIRST* LEGO League (FLL) is for grades 4-8. In FLL, students design and build LEGO robots and compete in themed challenges. FLL team members also identify a problem and create and present a unique solution to themed challenges. In addition, FLL teams compete in teamwork, known in FLL as “Core Values”. Teams compete at local venues, possibly moving on to the state Western or Eastern Washington State Championships, and World Championships.

*FIRST* Tech Challenge (FTC) is for grades 6-12. *FIRST* Tech Challenge teams design and build 18” by 18” robots and compete in two-on-two matches and document their design processes through the creation of an Engineering Notebook. Teams compete at local venues, possibly moving on to the State Championships, and World Championships.

Special Olympics Project Unified Robotics is the first-of-its-kind to inspire students with and without intellectual disabilities to consider STEM careers, as well as unite students of diverse abilities as teammates and competitors on this field of play. Partners work alongside athletes, forming small teams working on an objective. Teams design, build, and program their own robot using LEGO® MINDSTORMS® Kits. Each team presents their robot and participates in a culminating tournament. Teams can move on to the Washington Championship on November 17 at the Pacific Science Center.

*FIRST* Robotics Competition (FRC) is for grades 9-12. **Our team is an FRC Team.** Teams design and build large robots weighing up to 140 pounds during an intense build season, and compete at 2 district events, possibly moving on to the PNW Championships, and World Championships. Students have the opportunity to learn technical skills; including programming, engineering design, Computer-Aided Design (CAD), electrical. In the FRC program, teams are run like businesses, and students also learn teamwork, project management, entrepreneurial, marketing, and public speaking skills. Because teams promote themselves while recruiting mentors and students and participating in fundraising, students can also learn graphic design, web design, public relations, and social media promotion. FRC teams are mentored by engineers and business professionals. FRC teams welcome interested parent, community, and corporate mentors.

## TEAM AWARDS

- 2011 – Seattle Cascade Regional: Judges Award, Captain of Alliance 4
- 2012 – Seattle Cascade Regional: Innovation in Control Award sponsored by Rockwell Automation
- 2013 – Seattle Regional: Regional Finalists
- 2014 – PNW FIRST Robotics Glacier Peak District Event: Imagery Award in honor of Jack Kamen, Volunteer of the Year – Jin Hayashi, Captain of Alliance 6
- PNW FIRST Robotics Mt. Vernon District Event: Team Spirit Award sponsored by Chrysler, Pit Safety
- 2015 – PNW District - Glacier Peak Event: District Chairman's Award, Dean's List – Ian Good, Volunteer of the Year – Lori Hittle, Captain of Alliance 4
- PNW District - Mount Vernon Event: District Engineering Inspiration Award, Industrial Safety Award sponsored by Underwriters Laboratories
- PNW District - Central Washington University Event: Industrial Design Award sponsored by General Motors, Captain of Alliance 2
- Pacific Northwest District Championship: Regional Engineering Inspiration Award, District Championship Winner
- Tesla Division (FIRST Championship): Tesla/Archimedes Division Imagery Award in honor of Jack Kamen
- 2016 – PNW District - Glacier Peak Event: Team Spirit Award sponsored by FCA Foundation, Captain of Alliance 4
- PNW District - Central Washington University Event: Industrial Safety Award sponsored by Underwriters Laboratories, Judges' Award, Captain of Alliance 8
- Peak Performance: Climber Award
- 2017 – PNW District - Auburn Mountainview Event: Imagery Award in honor of Jack Kamen, Captain of Alliance 2
- PNW District - Glacier Peak Event: District Event Winner, Innovation in Control Award sponsored by Rockwell Automation
- Carver Division (Houston FIRST Championship): Captain of Alliance 6
- Peak Performance: Preseason Event Winner
- 2018 – PNW District Glacier Peak Event: Team Spirit Award sponsored by FCA Foundation
- Pacific Northwest District Championship: Team Spirit Award sponsored by FCA Foundation
- 2019 – PNW District Mount Vernon Event: District Event Winner, Industrial Design Award sponsored by General Motors
- PNW District Glacier Peak Event: District Event Winner, Judges' Award
- Pacific Northwest District Championship: District Championship Finalist, Team Spirit Award sponsored by FCA Foundation
- Turing Division (Houston FIRST Championship): Captain of Alliance 3

## TEAM ACTIVITIES

### September – December: Pre-Season (1 day per week and varied weekends)

-Recruit new members and mentors, conduct outreach events, mentor FLL and Unified Robotics, attend off-season competitions, host *FIRST* competitions, volunteer at *FIRST* competitions, do community service, work on pit and spirit, conduct safety training, train for upcoming season, work on award applications.

### January – Late February: Build-Season (5 days per week)

-Design and build FRC robot

### Late February - Late April: Competition-Season (1-2 days per week and varied weekends)

-Compete in FRC Districts and possibly PNW Championships and World Championships, conduct other activities as time allows

### May – June: Post-Season (1 day per week and outreaches)

-Recruit new members, recruit mentors, select team officers, generate team goals and business plan, conduct outreach events, do community service, work on pit and spirit, do off-season engineering projects, train for upcoming season, thank our sponsors

### June – August: Summer Activities (Host 2-3 summer camps, varied off-season projects, outreaches, and meetings)

-Conduct outreach events, do community service, work on pit and spirit, do off-season engineering projects, train for upcoming season, Recruit mentors

### Year-round:

-Raise funds for team sustainability by getting sponsors and conducting fundraisers

-Have fun, build fun, be fun

## MEMBER INVOLVEMENT

Students on Team 2930 should be actively involved with the team. Students are expected to arrive on time for team meetings and events and remain for the duration of the meeting or event. Team members are required to attend at least 70% of the team meeting hours in order to stay on the team, without prior approval/communications with an advisor.

All members must complete basic safety training, *FIRST* training, general robot training, tool and electrical training.

All members must complete written tests for all tools. If using the shop tools, you must take the practical training for each tool you will be using.

It is highly recommended that all members create an account and join the team's Trello page for keeping up to date and communication.

All members are required to participate in at least three (3) outreach events and at least one (1) community service activity per year.

All members are required to participate in fundraisers. These may include; ASB concession stands, FLL competition concession stands, and Field Day in the Spring.

All members will sign-up and volunteer for at least one (1) *FIRST* event per year. (Off season competitions, FLL, FTC, FRC, Unified Robotics).

Grades are important. Completing school work should be prioritized before participating in team work sessions and activities. Since team meetings begin at 6:00pm you have time to work on school work prior to the meetings. Mr. Wilson's room will be available on most days. You can also use the Library and Commons as a place to work.

Students and Families are required to check their email daily. Text messaging may also be used depending on Sub-Team. During competition season we use Slack as another way we communicate (more information to come on Slack throughout the season).

Members are required to consistently follow all team and school rules.

### **MEMBER EXPENSES**

Yearly member fee is \$100 and includes two tee-shirts and a team hat for new members. Returning members will receive two new shirts, but no additional hat.

Other cost may include; travel fees, food for build season meals, optional team apparel/merchandise, donations for fundraisers (Parent club auction, Snohomish Educations Foundation Auction, Italian Dinner Dessert Dash, Food for concession stands),

ASB Card is required for team membership.

Travel fees to competitions, possible for attendance at PNW Championships (~ \$100), World Championships (~\$900), or a District competition for FRC (~\$50-\$150/per overnight events). Travel fees are non-refundable.

### **MEMBER BEHAVIOR EXPECTATIONS**

Team members must wear their team shirts and hats when participating in any team activity or event. Feel free to add other approved spirit gear as long as your team shirt and hat remain visible.

Team members are expected to maintain a cumulative GPA of 2.0 This will be checked at each grading period by the advisors.

All students and adults representing Team 2930 must demonstrate a positive attitude at all times.

All members and adults should be respectful toward everyone with regard to race, religion, gender identification, and demonstrate Gracious Professionalism at all times. FRC Team 2930 believes in the power of Gracious Professionalism, a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. Team 2930 members are willing to help when asked.

All members will show initiative by asking a sub-team leader, mentor or coach for something to do if they find themselves with nothing to do. Showing initiative by finding ways to improve the team is encouraged.

All students and adults will demonstrate appropriate meeting behavior; including, but not limited to: listening while others are talking, not engaging in outside activities (like using an electronic device), and actively participating in discussions.

Communication written on behalf of the team must be approved by an advisor.

Any commitments made on behalf of the team must be approved by the officer team and advisors.

Out of courtesy to others, there will be no Public Displays of Affection as referenced in school handbook.

Team 2930 will build and maintain a culture of respect and cooperation amongst all members, mentors, parents and coaches.

Members are expected to follow the Team Safety Rules, school rules, and all *FIRST* safety guidelines, as well as the directions of the team Safety Captains, advisor, coach, and mentors. If you have questions, ask the advisor, coach, or a mentor.

All members who miss a meeting need to contact via email with a reason prior to the end of the school day and are responsible for reviewing the emailed meeting minutes.

When emails ask for a reply, students will respond within 24 hours.

If any of the above behavior expectations are not met there will be a conference with the student and the advisors. If repeated or serious violations occur, consequences may be issued up to and including removal from the team. If removed from the team, students will not be able to be considered for readmission until September 1<sup>st</sup> of the following season.

### **COMPETITION EXPECTATIONS**

The team's travel selection process is based on the following criteria: attendance of at least 75% of the hours of general Tuesday meetings (exceptions preapproved by teacher advisor on case-by-case basis), attendance of at least 60% of the hours of build season sub-team meetings, and contribution to sub-team(s) determined by sub-team lead and mentor. To be an excused absence, an email must be sent giving reasons as to why you are absent and approved by an advisor before the end of that school day. All officers, deputies, and subteam leads must have no unexcused absences.

The Sonic Squirrels will actively pursue opportunities to help anyone who needs help. No task is too small for Team 2930.

All members will eagerly help any *FIRST* volunteer.

All team members, mentors, friends and family will acknowledge and understand that they are a reflection of the team, and will demonstrate Gracious Professionalism, encouraging and supporting all teams.

At the competition venue, 100% of the time will be spent on *FIRST* related activities. Electronic devices may not be used for personal entertainment.

Team 2930 members and guests will be respectful audience members.

All Team 2930 members will be present in uniform for the opening, closing, and award ceremonies.

The team logo must be always clearly visible.

In the stands, Team 2930 will actively participate in scouting, and are encouraged to participate actively in cheering, and dancing.

Students will remain together at the competition and hotel venues. Travel between venues will be with an adult chaperone. While at the venue members must always be with at least one other member "BUDDY SYSTEM"

Members will honor the team curfew set by the advisor.

All team and school rules apply when traveling to a competition.

Certain competitions will have additional rules and expectations, which will be handed out prior to the event.

Be safe, use common sense. Follow all team safety rules, school rules, and all *FIRST* safety guidelines, as well as the directions of the team Safety Captains, advisor, and mentors. If you have questions, ask the Safety Captains, advisor, or a mentor.

## VARSIITY LETTER CRITERIA

Attendance – Member has attended at least 80% of total General Meeting hours during the year; excused absences do not count towards the 80%.

Recruiting – Member has participated in at least one new member and/or mentor recruitment.

Outreach - Member has attended at least four (4) team outreach events

Fundraising – Member has participated in at least three (3) FRC 2930 fundraisers (ex: ASB Concession Stand, Italian Dinner, Field Day)

Awards – Member has actively assisted in working towards earning *FIRST* awards. (requires signoff from non-parent mentor/advisor)

Grades – Member has maintained a GPA of 2.5 or better for the current school year

Sub-team Support – Member has contributed to their sub-team in a significant way (requires signoff from non-parent mentor/advisor)

*FIRST* Events – Member has attended Kickoff and two (2) District competitions

*FIRST* Mentoring – Member has mentored or trained at least one (1) other *FIRST* team (FLL Jr., FLL, FTC, FRC) or Unified Robotics Team

*FIRST* Volunteering – Member has volunteered at a minimum of two (2) *FIRST* events

Leadership – Member has led at least one team training, team meetings, engineering design reviews, an outreach event, or an inter-team workshop

Community Service – Member has participated in ten (10) hours of pre-approved Non-*FIRST* event volunteer activities throughout the season (requires signoff from community service supervisor). The spirit of community service is what we are looking for with this requirement.

Acceptable date range June 1<sup>st</sup> – May 31<sup>st</sup>.

No overlapping of requirements.

## TEAM COMMUNICATION

FRC Team 2930 uses email ([sonicsquirrels@gmail.com](mailto:sonicsquirrels@gmail.com)) and Trello as its primary forms of communication. All members will ensure that their email address and preferred contact phone number are included on the communication list maintained by the team advisor.

All Team members are encouraged to sign up for and check the team Trello page for upcoming events and year-round subteam documentation/happenings: <https://trello.com/2930>.

Team 2930's web address is [www.sonicsquirrels.com](http://www.sonicsquirrels.com). A team calendar can be found here.

The team's public Facebook page is *FIRST* Team 2930 Sonic Squirrels.

The current season's robot rules, administrative rules, and safety rules can be found at <https://www.firstinspires.org/robotics/frc/game-and-season>. This is *FIRST*'s official website.

Team 2930 encourages its members to check the Chief Delphi public forum frequently for useful information, at [www.ChiefDelphi.com](http://www.ChiefDelphi.com).

To find information about past, present, and future FRC teams and events, visit Blue Alliance at [www.thebluealliance.com](http://www.thebluealliance.com).

## PARENTAL INVOLVEMENT

Parents/guardians should:

- Attend parent meetings
- Attend mandatory pre-travel meetings
- Submit a volunteer application to the school (Required to participate with students at builds, events, and meetings)
- Participate in at least one (1) team activity before the first team competition (fundraiser, community service, outreach, etc.)
- Assist with transportation to team events when requests are sent out.
- Attend at least one (1) of the FRC competitions
- Provide at least one (1) group meal during build season or at an official team event
- Provide current contact information for students, parents, and guardians
- Check email regularly to stay informed about team activities

## TEAM UNIFORMS

All team members will wear the team shirt and hat while representing Team 2930 at events the optional Grey or Orange Sweatshirt may be worn over the shirt. An exception will be made for events where we are required to wear specific volunteer shirts while doing community service.

**Exceptions to the handbook may be considered with the preapproval of an advisor.**

## LEADERSHIP

**Advisors:** Sean Wilson – Math teacher at GPHS [sean.wilson@sno.wednet.edu](mailto:sean.wilson@sno.wednet.edu),

Jin Hayashi – Science teacher at GPHS [jin.hayashi@sno.wednet.edu](mailto:jin.hayashi@sno.wednet.edu)

**Mentors:** Lead Operations Mentor – Melanie Limtiaco [melanielimtiaco@gmail.com](mailto:melanielimtiaco@gmail.com)

Lead Engineering Mentor – Josh Myers [joshrmymers@gmail.com](mailto:joshrmymers@gmail.com)

Other Mentors – Heather Bales, Beau Brown, Adam Calabrese, Brent Chauvin, Patrice Chauvin, Bryn Dole,

Tammy King, Trish King, David Krismer, Tim Porter, Jason Reiner, Thomas Rothschild, Kevin Torrico

**Student leadership 2019-2020**

Engineering Officer – Cole Elfstrom (12)

Operations Officer – Cordelia Notbohm (11)

Logistics Officer – Trent Brown (11)

Safety Officer – Claire Calabrese (11)

Outreach Officer – Ryan Krismer (11)

Finance Officer – Ethan Jorde (10)

**Student Subteam Leads – To be determined later in the fall**

By signing this contract, I understand that I must follow the rules directed in this handbook. If I have any future concerns regarding my requirements as a team member, I will refer back to this document or ask an advisor.

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STUDENT FIRST NAME

STUDENT LAST NAME

PHONE NUMBER

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Email Address (please print clearly to avoid errors)

Shirt Size

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SIGNATURE

DATE

By signing this contract, I give my permission for my student to participate on the robotics team and agree to the parent involvement Section of this handbook.

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PARENT/GAURDIAN FIRST NAME

PARENT/GAURDIAN LAST NAME

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Parent/Guardian Email Address (please print clearly to avoid errors)

PHONE NUMBER

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PARENT/GAURDIAN FIRST NAME

PARENT/GAURDIAN LAST NAME

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Parent/Guardian Email Address (please print clearly to avoid errors)

PHONE NUMBER

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SIGNATURE

DATE