Welcome to Team 2551 - Penguin Empire Robotics

Our mission is to engage young people in exciting, mentor-based programs that build science, engineering and technology skills, cultivate teamwork and collaboration, inspire innovation, and foster well-rounded life capabilities including, problem solving, self-confidence, communication, and leadership.

Being a part of robotics is not only fun, but it is a great place to learn valuable skills. Having full access to San Marin's auto shop as well as woodworking supplies means that every member will learn how to safely use all of the equipment necessary for constructing our robot. Some of the important skills you will learn as a member of robotics club are:

- -Working with power tools and machinery
- -Woodworking, metalworking, welding, and programming
- -Teamwork and problem solving
- -Experience designing and building an original robot
- -Gracious Professionalism

As with any club, there are expectations for every club member. While robotics club is very fun, it requires a substantial time commitment along with a certain amount of enthusiasm. Some club expectations are:

- -Active participation and involvement
- -Attend as many meetings as possible
- -Be willing to learn required skills
- -Attend all major events

Penguin Empire Robotics has several rules for all members to abide by. Most are simply common sense, and all are designed to keep the club productive and safe. The Robotics Club Rules are:

- -Phone use only with permission
- -Absence notification to officer required 24 hours in advance
- -Auto shop tools treated with caution
- -Safety glasses required at all times when in auto shop
- -Stay focused and on task
- -Tools are not toys
- -Only use robotics equipment
- -Put away what you take out.
- -Be respectful to teammates

<u>What you can expect from Penguin Empire</u>
-Familiarize yourself with tools/machinery
-Learn to use auto shop machinery
-Experiment with building mini robots
-6 weeks of build season when we meet everyday
        -Watch a podcast about the year's game/competition
-Designing/brainstorming
-Experimenting and prototyping
-Apply new skills to build an awesome robot:

1. Build frame
2. Construct onboard system
3. Test prototypes
4. May learn to program (C++)
5. Apply onboard system to robot part by part
6. Design wire circuit board
7. Practice driving robot
8. Tweak and adjust robot
9. Package robot for completion and transport
10. Win competition!

<u>FIRST Competition at UC Davis:</u>
        Day 1- Re-assemble robot at pit, get robot inspected, practice in arena
        Day 2- Compete, change bumpers, fix if necessary
        Day 3- Compete, semifinals alliances chosen, pack up pit and leave for home
        Competing: Chosen to play with random teams against random alliances