



ATHENA'S WARRIORS SPONSOR SCROLL

After months of workshops and planning, the season has officially started! Last Saturday students and mentors, returning and incoming alike gathered into the new classroom to watch the live game reveal. Though there was some disappointment due to members initially believing the game would be an air game, it quickly faded, replaced with hype at this year's new game: FIRST Steamworks.

The team quickly began sketching out ideas, everyone's mind aglow with inspiration. After the free ideas session, we laid out a chart and began assessing the different ideas for robot features. We ended up deciding on a robot centered around gear collection and scoring, along with climbing the airship at the end of matches to obtain the highest amount of points within a reasonable design.

While prototypes began development, some members of the business team began creating sketches for drive team uniforms in the flavor of the steampunk theme. We have to defend our visual awards after all. On the subject of visuals, we're also altering the logo, replacing the old knight hat on the owl with steampunk flavored headgear.

Besides the solid visual design, we also built the test versions of our lifting mechanisms-the ones that will allow our robot to climb the rope. Additionally, we have built our own loading station to practice with, something which we actually haven't done in the past two years. Now we will be able to test our mechanisms and robots long before they get onto the field.

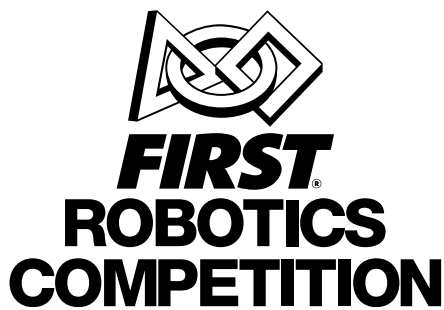
Right now, mechanical has been working out designs in Solidworks, having completed many parts of the robot and starting on writing the parts list. This year we may even be able to run simulations in the program. The programming team so far has been writing out code before the robot has even begun construction. Currently, they are midway through coding the drive train control.

Electrical has been tinkering and making sure that wires and all things that spare are good to go. That way, the power of electricity will flow through our creation. Making new changes to last years Powerglove controller and our new electronics system featuring LEDs.

While we have already gotten quite a lot done, but we still have a while to go before build season ends on February 22. So until then, stay tuned for more updates as we move forward!



FIRST STEAMWORKSSM, the 2017 *FIRST* Robotics Competition game, invites two adventure clubs from an era in which technology relied on steam power to prepare their airships for the ultimate long-distance race.



Each three-team alliance prepares to take flight in three ways:

- 1. Build Steam Pressure.** Robots collect fuel represented by green balls. They score it in high and low goals in their boiler. As fuel is scored steam pressure in the tank on the alliance’s airship builds —the high goal builds pressure faster than the low goal.
- 2. Start Rotors.** Robots retrieve and deliver gears to pilots on their airship who then install them on the appropriate rotor. Once a gear train is complete the rotor can be started.
- 3. Prepare for Flight.** Adventure clubs want their robots to climb aboard their airships so they can assist the pilots during the race.

Autonomous Period:

Robots operate independently from preprogrammed instructions for the first 15 seconds. Adventure clubs score points by:

- Reaching their baseline
- Delivering gears to the airship
- Scoring fuel into the boilers

Teleoperated Period:

Operators take control for the final two minutes and fifteen seconds. Adventure Clubs continue to score points by:

- Collecting and delivering gears to their airship
- Scoring fuel in the boilers
- Climbing the ropes on their airship to prepare for flight
- Populating gear trains to start rotors
- Defending against other Adventure Clubs

The adventure club with the highest score at the end of the match is best prepared for the race and wins!

