

SONIC SHOUTOUT Week 2



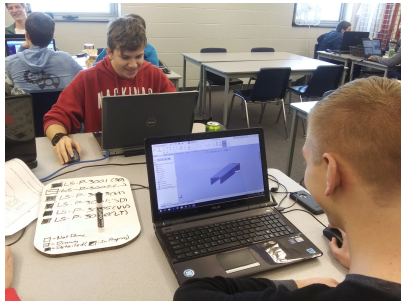
3.... 2.... 1.... Blasting off on Week 2!

After a busy week one, week two seems to have been even busier. We have started the design process after finalizing our strategy, and we are excited where things are heading. Our half field build is complete, and the design process is underway. Very exciting! Keep reading for more.



Chad is teaching the Design Team about motor and gear calculations for the Cascade Lift.

Design Team



Over the past week, the design team has completed many tasks. To begin, we continued to teach our newest design team members, and finish up concepting of various robot mechanisms, including cascading lift, intake/retrieval mechanism, and climbing to HAB level 3. On Saturday, we split into 3 groups with each individual group focused on starting designs for the cascading lift, retrieval

mechanism, and robot climber respectively. A couple of students also worked on updating the chassis, changing it to an 8 wheel system as opposed to the 6 wheel system previously implemented. By the end of next week, we hope to have most, if not all, of the chassis designs released, and get the rest of the sub assembly first draft designs completed, or nearly completed.

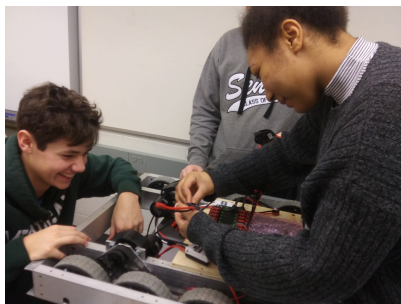
Chairman's/Promotion team

This week the Chairman's team finalized and finished the essays for the Chairman's Award submission. Since the essays are finished, the team began working on the Chairman's video which showcases the outreach and community work the team has accomplished. Additionally, the team nominated Tonya Dowd for the Woodie Flowers Award which recognizes an



outstanding mentor for our team. The Chairman's/Promotion team along with the Build Team colored paper bags for Children's Food Basket.

Wiring Team



The wiring team has focused on teaching new students the foundation of wiring. They have also working on finishing a chassis with new motors, motor controllers, pneumatics and a RoboRio.

Build Team

The build team has finished building the field and has moved on to training younger students how to use the mill. The build team has also been learning how to wire. While those students learned how to wire and use the mill, the more experienced students have been cleaning and organizing the room to increase efficiency. The build team has also helped the Chairman's/Promotion team color bags for the Children's Food Basket.



Programming Team



This week the programming team has been focused on learning and working with several different forms of vision processing programs. The two different methods being used are TensorFlow and our Python program from the 2017 game. TensorFlow is trained to recognize images, and we are hoping to have it recognize the cargo and hatch panels to easily find them on the field. The Python program uses

infrared to locate reflective tape that is on different field pieces, and doing that will help us be able to put cargo and panels in the correct places. The infrared method has proved to be reliable, since it has been proven to work, finding the outlines of the reflective tape, but TensorFlow is still in the process of being learned and properly trained.

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