

FRC 3100 LIGHTNING TURTLES



Build Season Week #5 Newsletter
February 10th, 2020

Assembly Time!

2020 BUILD SEASON

WEEK 1: 1/04 - 1/12
INFINITE RECHARGE Kickoff &
Prototyping

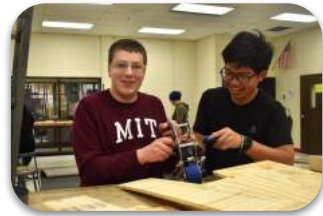
WEEK 2: 1/13 - 1/19
Design Finalization
Collector & Begin Robot
Fabrication

WEEK 3: 1/20 - 1/26
Design Finalization
Shooter & Climber
Component Fabrication

WEEK 4: 1/27 - 2/02
Fabrication Completion
Full Robot Assembly
Component Programming

WEEK 5: 2/03 - 2/09
Full Robot Program
Integration &
Autonomous Routine

WEEK 6: 2/10 - 2/17
Drive Team Tryouts
Final Preparations
Week Zero Event



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HEADLINE

Continued Fabrication

We have continued fabrication of several components of our robot. Many groups have worked together to create the necessary parts for each mechanism on our robot. Because of this, we've completed most of our robot assembly this week.



These fabricated components include parts for the climbing mechanism, guide rails for the collector, and parts for mounting the baseboard to the robot. We've begun the fabrication of our bumpers, and expect to finish them within the next week.



Electrical has gathered all of our motor controllers, which function to run the motors found on the robot. Additionally, they have completed the wiring of the components needed in order for us to run the electrical board properly. Now, they are waiting for the baseboard to be mounted to the drivetrain, so that they will be able to attach all the electrical components to the underside of the baseboard.

Electrical

Our electrical division has made a lot of progress within the last week, as they have completely built our electrical board that is used for the mechanical operation of our entire robot.



Gearboxes

A small team of students were tasked with building a pair of gearboxes that would be able to move the wheels on our drivetrain using the new Falcon motors.



The team gathered the materials to make the gearboxes, and made them out of parts from AndyMark, such as gears and a plastic housing used to hold the motors. They assembled the gearboxes and put grease on the gears. The students worked efficiently to get this task done in a single meeting.

Robot Assembly

This week, students buckled down to finish assembly of our robot in time for our week zero event this upcoming Saturday. We attached our Shooter to our Collector- Conveyor system. Then, we assembled our electrical baseboard, and attached it to the drivetrain. In the end, we were able to assemble everything but our climber, and get it on our drivetrain for systems testing.

Upon testing, we found that our drivetrain moves seamlessly, despite having the added weight of our mechanisms on top of it. All our mechanisms functioned well independently during our initial testing, and we plan to do a full mechanism test within the next week.



Student Spotlight & Media

Student Spotlight

Tate was handed a flier on the first day of school for the robotics team. Originally he thought he wouldn't find robotics interesting, but he decided to come to the informational meeting anyway. To his surprise, Tate found that robotics actually appealed to him, and he decided to join the team.



Tate has made many friends on the team since then, and has become a valuable member of both the Media and Communications Divisions.

Fun Fact: Tate spends a lot of time playing video games, "Maybe too much" -Tate

Media

The Media team has been hard at work this entire team documenting, photographing, and even writing the newsletter you're reading right now! They are always acting behind the scenes to keep you informed on what we are up to. They take pictures and video all throughout the meeting, Make social media posts, and manage outreach events for the team. While it might not seem very necessary dedicated to something non-technical on a robotics team, they are an Important and necessary addition to our team.



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