

# September 23, 2022

## building

### **focus:**

Detailed Brainstorming

### **summary:**

We narrowed our ideas for the two robots and used whiteboards to draw out specific components. We took into account the physics that would affect our robot (center of gravity, torque) and drew diagrams to help us design. Specifically, we drew out the arm and lift and looked at parts that we could possibly prototype with. We also prioritized certain parts of the robot to build.

### **challenges:**

We tried to use onshape for CAD, but after some exploration, we figured that we weren't fans of the user interface. Had some problems understanding how the telescoping arm would work.

### **next steps:**

Still figure out telescoping arm, then start prototyping!

### **focus:**

Working on Chassis

### **summary:**

Disassembled old chassis to re-use motors

### **challenges:**

old screws had been assembled with loctite, so we had to use a heat gun to get them loose.

### **next steps:**

use our now-separated parts to re-assemble into a new chassis!

## coding

### **focus:**

Master doc of commands

### **summary:**

We worked on making a master list of FTC Java terminology and commands as a resource for people to look back on when they need help writing an auton or teleop.

### **challenges:**

Some of the code wasn't well documented enough, so we didn't know what some of our code meant/how to interpret certain results.

### **next steps:**

Documenting more complicated commands (OpenCV)

**focus:**

Controller Research

**summary:**

We did additional research on PID controllers. We found that we only really need to code a P and D variable, as both a D and I variable aren't really necessary. We found some pseudocode and started looking into past code.

**challenges:**

PID can be math intensive and we'll have to hunt for old code

**next steps:**

Look for old code, start writing code for PID

**focus:**

Begun the new PR packet

**summary:**

We looked at last year's packet for inspiration and begun creating the new one

**challenges:**

We have started using a new color scheme for 20409 and graphical design is hard

**next steps:**

Continue to work on the pages and begin to tget images

**focus:**

Newsletter, Instagram post

**summary:**

Since we're going to have a booth at the Cambridge Science Festival, we created an instagram post to promote the festival as well as ourselves. We also decided to have a newsletter (that we email to parents and members) instead of continuing to blog post on the website, so we wrote and formatted our first newsletter.

**challenges:**

We had to figure out how to embed files in emails

**next steps:**

Send out the newsletter and work on PR packet

**focus:**

Work on Sponsorships

**summary:**

Julia and Giulia started researching organizations that are either boston based, returning sponsors, women-owned, or STEM Focused

***challenges:***

***next steps:***

Continue and start reaching out