

# **3249 D Robotics Journal**

**JORNAL </3→ .\_\_.**

**-Day 1:**

**\\"\*\*Max is 18x by 18y by 18z\*\*//**

YELLOW DISKS:

5.5 inch diameter

.75 inch THICK yummy

**Accurate**

ROLLERS:

9.8 inch LONG

2.4 inch Diameter

MAKE IT WIDE with like things extend from the base to make sure at the end we take up like 6 spaces extra so we get tons of points because each space is 3 points

We need it to have a way to launch them. How should we do it? list them

**Flywheel** ( I vote this one as it's easy to do)so 2 votes.. And some button to release

\

Yeah the release button won't be hard at all

## **COULD NOT GET FUSION 360 TO WORK**

Ways to grab the disk:

**Conveyor with inverted and really wide cowcatcher**

Or a robotic arm with a claw on the end with a fixed plate on the bottom of the claw to keep the disk in.

som

To spin the spin wheels for 10 points  
Spin it with wheels to move it  
If we do that then its forced to move off the holder while its moving unless we do some sort of gear change to move the gear that connects the two gone which is more work

Prototype image type a y if this is a good rough draft and n if we need to revise n

#### CODE

```
#region VEXcode Generated Robot Configuration
from vex import *
import urandom

# Brain should be defined by default
brain=Brain()

# Robot configuration code


# wait for rotation sensor to fully initialize
wait(30, MSEC)

#endregion VEXcode Generated Robot Configuration

rotations = 1
def when_started1():
    global myVariable
    pass

when_started1()

Def grab_disk():

def autonomous_mode():
```

```

    #this is subject to change to get tweaked for finals if we have time to
use the board to ourselves
    pass

//self-destruct if existing.

def driving():
    drive(1,rotation) #one full rotation goes 3.25 inches

def driving_left_front()
    moter_left.spin(vex.DirectionType.FWD, rotations,Vex.VelocityUnits.PCT)

def driving_right_front()
    moter_right.spin(vex.DirectionType.FWD,
rotations,Vex.VelocityUnits.PCT)

```

## Day 2

Keep that

Team meeting

van= helping everyone / learning python

Malachi = learning fusion 360 using yt.

Zeyen = using Ben to learn fusion 360. Prototyping for a design

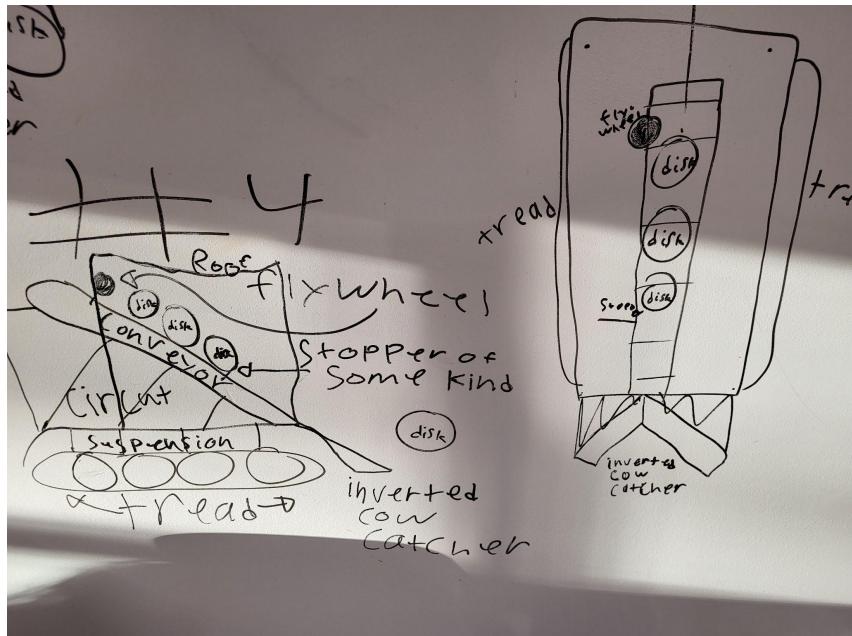
Ben = teaching everyone on how to use fusion 360

Caiden = not being productive

Team is making jokes about not removing stuff from the jornal.

Fusion is working learned that fusion doesn't like iam files,

Good to know



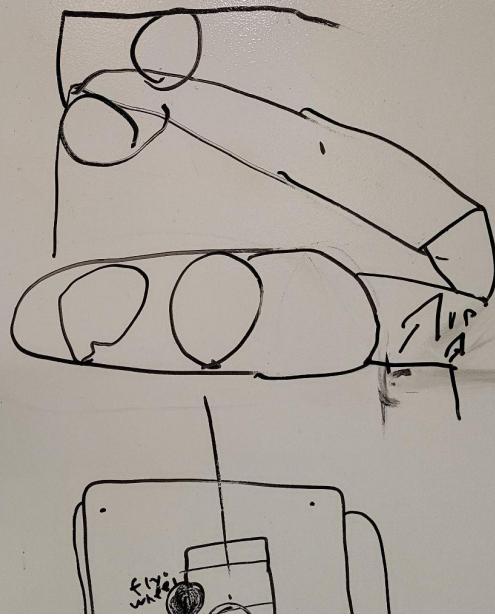
Number 4 has 3 votes

number 2 has 2 votes

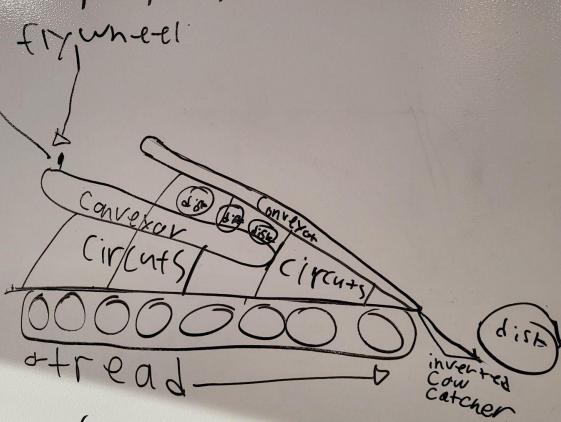
What if we do both

nevermind

#2

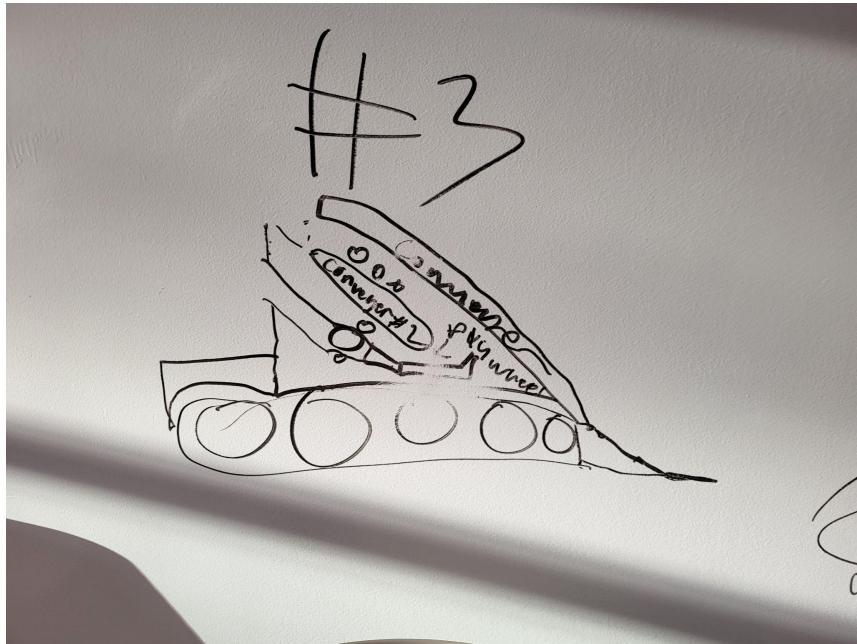


#1



#3

#1



DAY 2.5 (days that people are working but dont use a robotics day or it has been canceled)

Van= Not here/sick, No robotics

Ben= not here- mental health assessment, No robotics

Zeyen= No robotics

malachi= No robotics

caiden= No robotics

Reported caiden to ms hagin. Here's the response:

Ben,

Yes. I talked to him yesterday, but we will make it more official today (or the next time you have practice).

Thanks for bringing this to my attention.

Ms. Hagin

GOT code done for everything except for automation and controller as we dont know anything about the layout and when we are going to do for said layout

What should we use to move? Joystick or buttons?



People who voted joysticks: 2

People who voted buttons: 1

PLEASE VOTE!!!! NOW OR YOUR KIDNEYS ARE MINE!

BTW I'M ZEYEN AND I DIDNT PUT THAT! :00

BTW IM BEN AND I PUT THAT

VOTE TIME!!!!

THERE ARE THREE TYPES OF MOTORS THAT WE CAN USE (HIGH TORQUE, HIGH SPEED AND TURBO SPEED) HIGH TORQUE GIVES US THE ABILITY TO MAKE SURE THE DISK ACTULLY LAUNCHES OUT AND TURBO CAN PROBABLY GIVE US RANGE IS WE CAN FINE TUNE THE MOTORS. HIGH SPEED IS PROBABLY IN BETWEEN

TURBO(600RPM)

HIGH SPEED (200RPM)

## TORQUE (100 RPM)

Motors most likely going to be used is a high speed using a gear increased ratio to bump it up to like 250 rpm

mmmmmm

## Day 3

### Team meeting!

Ben = teaching van repit coding and learning vex code

Caiden = helping designs/citations/help build(hopefully not goofing off) (wasnt goofing off today!!!!!!!)

Malachi = building robot/learning fusion 360

zeyen = building robot/ writing is JORNAL </3 → .\_.

Van = not very awake/but was putting everyone where they should be

## Citations:

“VEX Spin up 2022-2023.” *Mr. Smith’s Classes : West Salem High School Computer Science, Engineering and Robotics*, 2022,  
[smithcsrobot.weebly.com/vex-spin-up-2022-2023.html](http://smithcsrobot.weebly.com/vex-spin-up-2022-2023.html).

Ireland, Education. “Robotics Education Ireland.” *Robotics Education Ireland*, 2014, [www.roboticseducationireland.com/vex-robotics-competition1](http://www.roboticseducationireland.com/vex-robotics-competition1).

(Christopherson)

For a source that wasn’t working heres a description basically it was about the flywheel

(“VRC Spin up Field Elements”)

VRC Game Manual

We voted on which bot we want

Caiden malachi and zeyen are starting to build the robot

caiden, Malachi, and Zeyen are almost done building the chassis while Van and Ben are learning/ doing programming.

Today we started building the prototype.

Caiden, malachi, and zeyen (mostly caiden) are building the basic structure of design 4.

Team is making jokes while building.

Caiden is taking a break

We are excited that there weren't any fighting in robotics today.

Me and van where out coding and trying to figure out what our future would be with this robot

Checking on the boys every once in a while as we thought they were gonna fight(caiden most likely)

## DAY 4

Van helping ben and zeyen  
Malachi building and redoing caidens mistakes  
Zeyen building and redoing caidens mistakes  
Ben coding the brain and the controller  
Caiden not here

Deconstructing what caiden built last time:COMPLETED  
The robot size has to be **LESS** than 18 by 18 by 18  
Caiden not being here is killing us  
We figured out what motors we wanted  
Wheels are almost done, chassis is also on its way

## Day 5

Van coding  
Ben gone  
Zeyen building  
Caiden not here  
Malachi not here  
Van coded the controller  
Zeyen built some of the chassis  
Got the controller to get the motor to run and stop

## Day 6

Van helping everyone

Ben coding the controller

Zeyen building chassis

Malachi building conveyor

Caiden help build

Caiden is playing games

Ben got the computer to make it so u have to hold a button  
for the motor to run

Ben is Making the motor work better

## Day 7

Ben help zeyen make the chassis and code the movement

Zeyen making chassis

Van helping in anyway i can

Malachi helping and building the conveyor belt

Caiden building the body

Ben and zeyen built the chassis

Day 8

Van helping zeyen build and code

Zeyen building

Ben not here

Malachi not here

Caiden not here

Got drivetrain working

Rebuilding chassis

Day 9

Ben coding

Zeyen build

Van helping

Caiden no here

Malachi no here

Zeyen rebuilding chassis

Ben making a better drive train

Day 10

Ben coding

Van helping ben

Zeyen chassis building

Malachi helping zeyen

Caiden not here

Day 11

Ben coding

Zeyen building chassis

Van helping everyone

Malachi building

Caiden not here

Day 12:

Ben doing jornal and coding

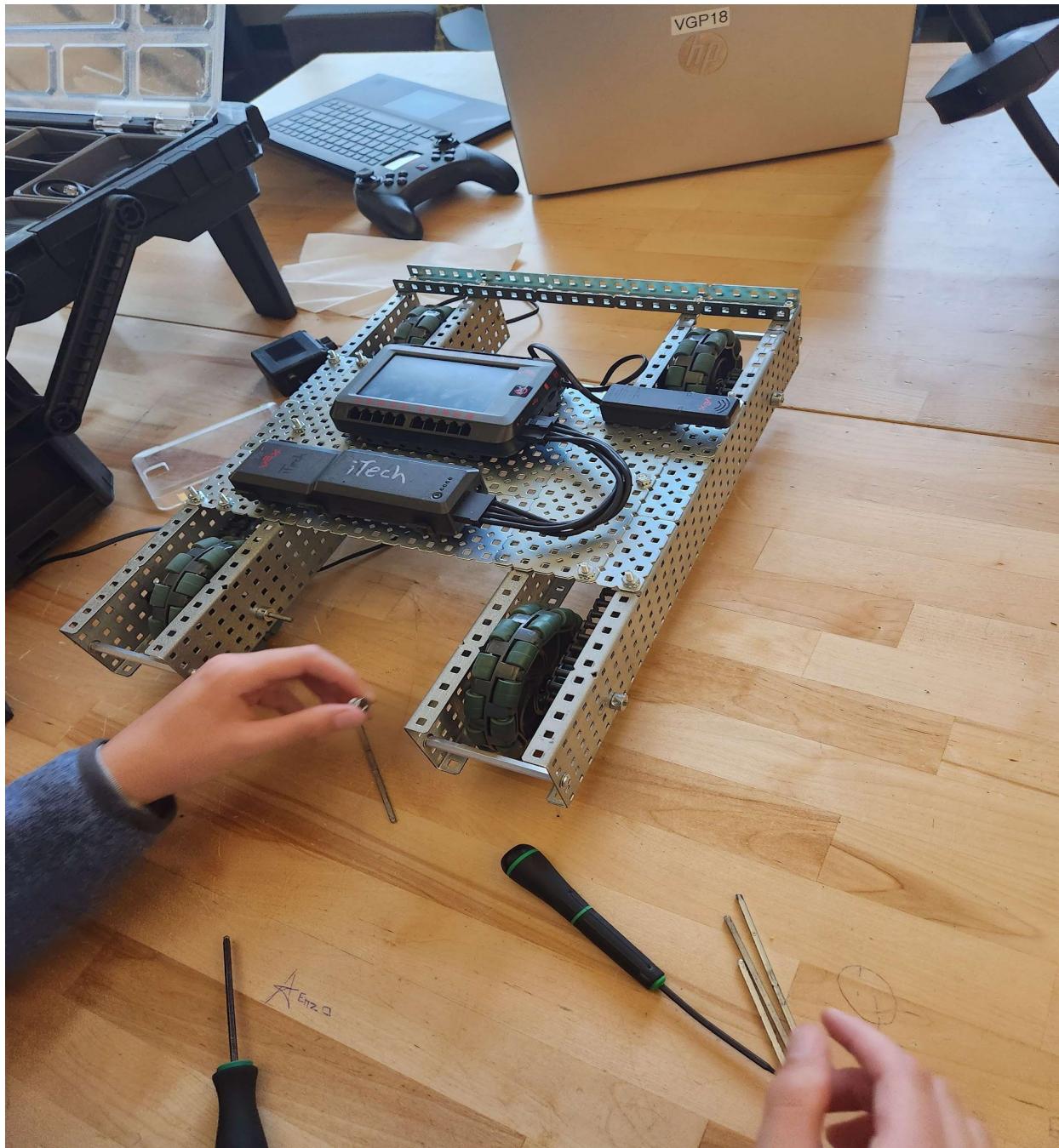
Zeyen is still building the drive chassis

Malachi is helping with jornal

Caiden is here but doing what he does best. Being off task\

Van has migraine from partying too hard

yesterday(halloween)



Day 13 van and corbin(caiden) are not here today for unknown reasons

Malachi they are going to make a chamber for the fly whiles Zyen is tightening the motors on the build

Ben is doing coding stuff and over seeing in vans absents and help make it drive.

Also malachi cant spell for life. But A for effort!

Coding needythingys

- Automation
- Full player control
- Mapped buttons on controller
  - 4 wheel drive
  - 
  -

Day 14

Van journal and help

Zeyen make chassis better

Ben code and build flywheel

Conboy not here

Malachi not here

DAY 15

Caiden not here

Malachi building flywheel

Van not here (rip)

Ben building chassis+upper body

Zeyen writing Journal building chassis+upper body

Day 16

Everyone but malachi and corbin are here its getting lonely  
so cold darker yet darker.

(malachi) I talked with my team on discord and they told candon to not do anything to the bot. I also exspined why the team despise him. I was but in changed today i am mostly just baby siting corbin he put somestuff on it and having him removing it now. I just spoke with one the the members about how good our ai is he said terrible to them to me malachi. Malachi is working on the fly while with littel to no progress as they havent done this before and its a whole new experience for them but trying their best.

Day 17

Van doing jornal and helping ben

Ben coding

Zeyen not here

Caiden building flywheel

Malachi not here

Day 18

Van doing jornal and helping ben

Ben doing coding

Zeyen not here

Caiden not here

Malachi building flywheel

Day 19

Van doing jornal helping everyone

Zeyen building

Ben coding

Caiden here but sick

Malachi not here

Day 20

Van Doing jornal and helping everyone

Ben coding

Zeyen building and adding on the chassis

Malachi building flywheel

Caiden not here

Ben got autonomous mode kinda working

Day 21

Van jornal,coding

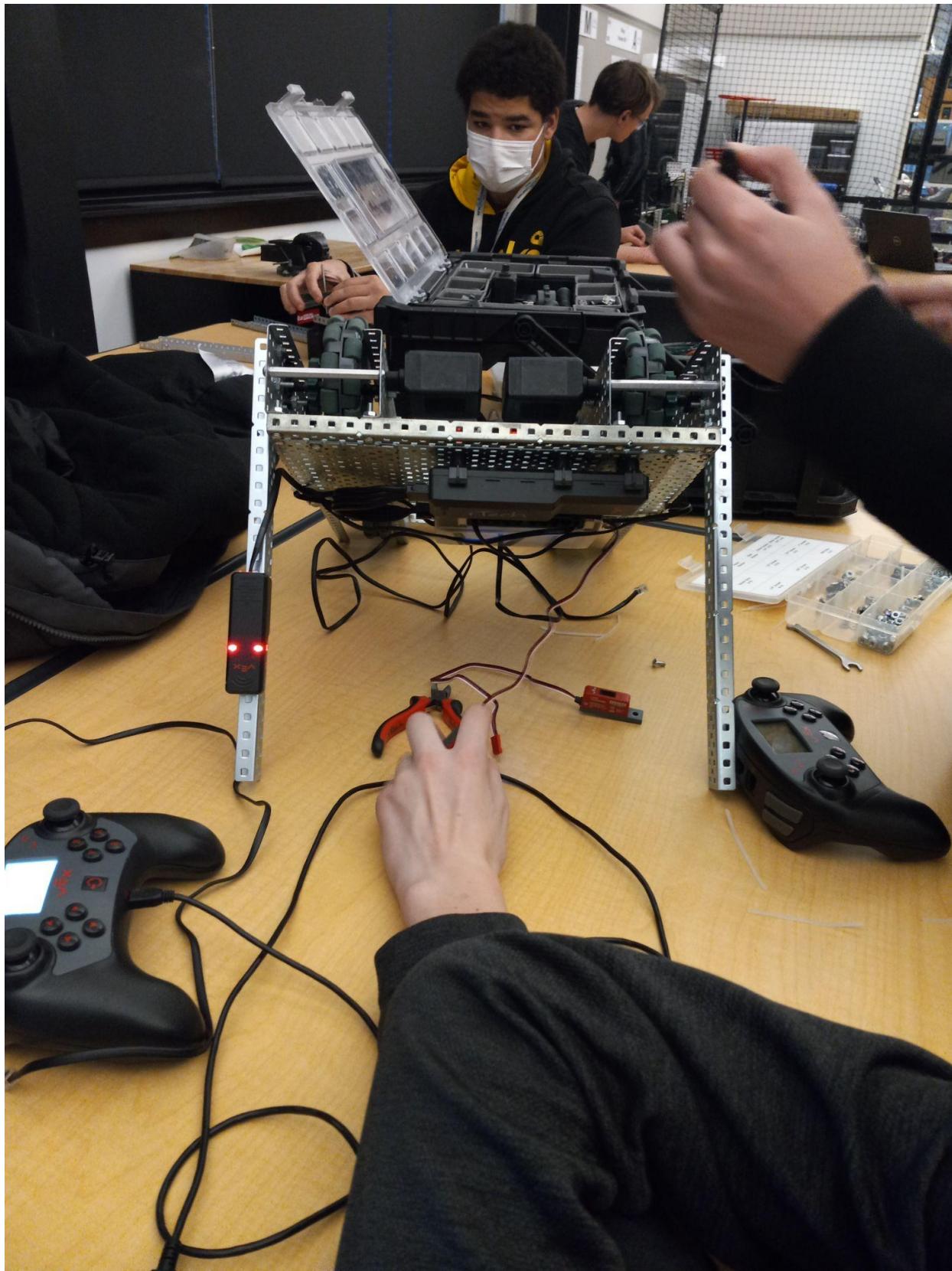
Ben coding

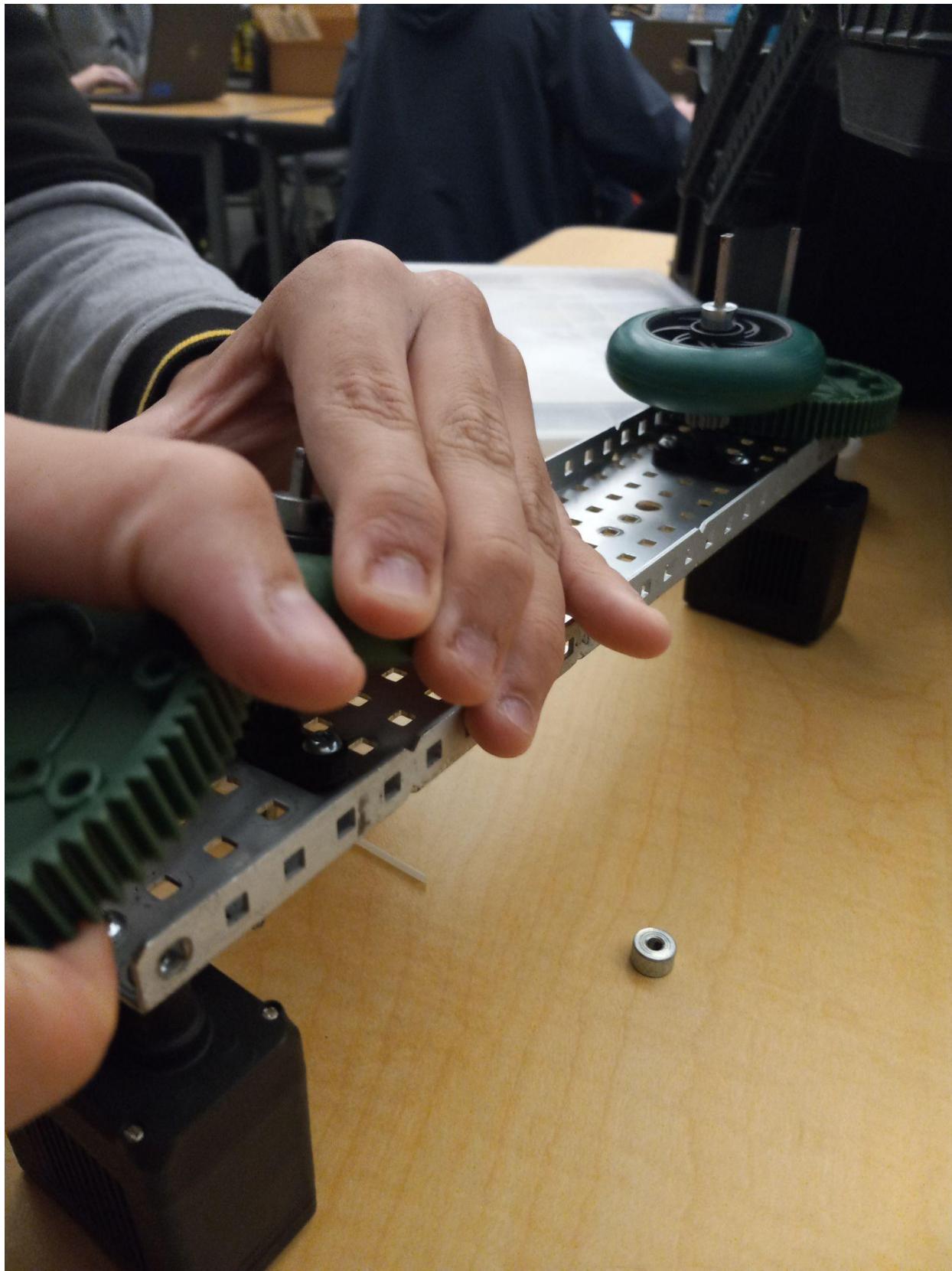
Malachi fly wheel

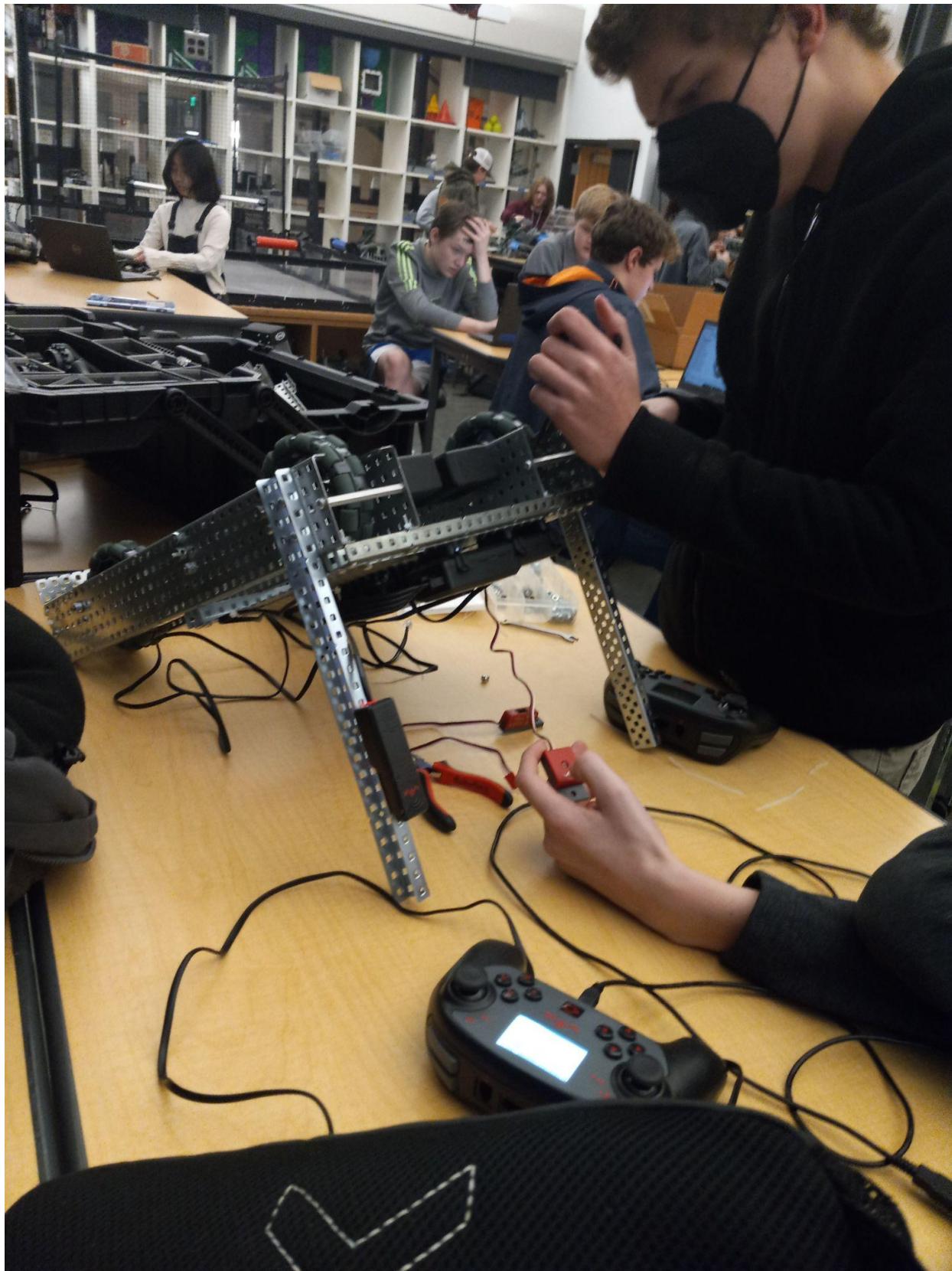
Zeyen building

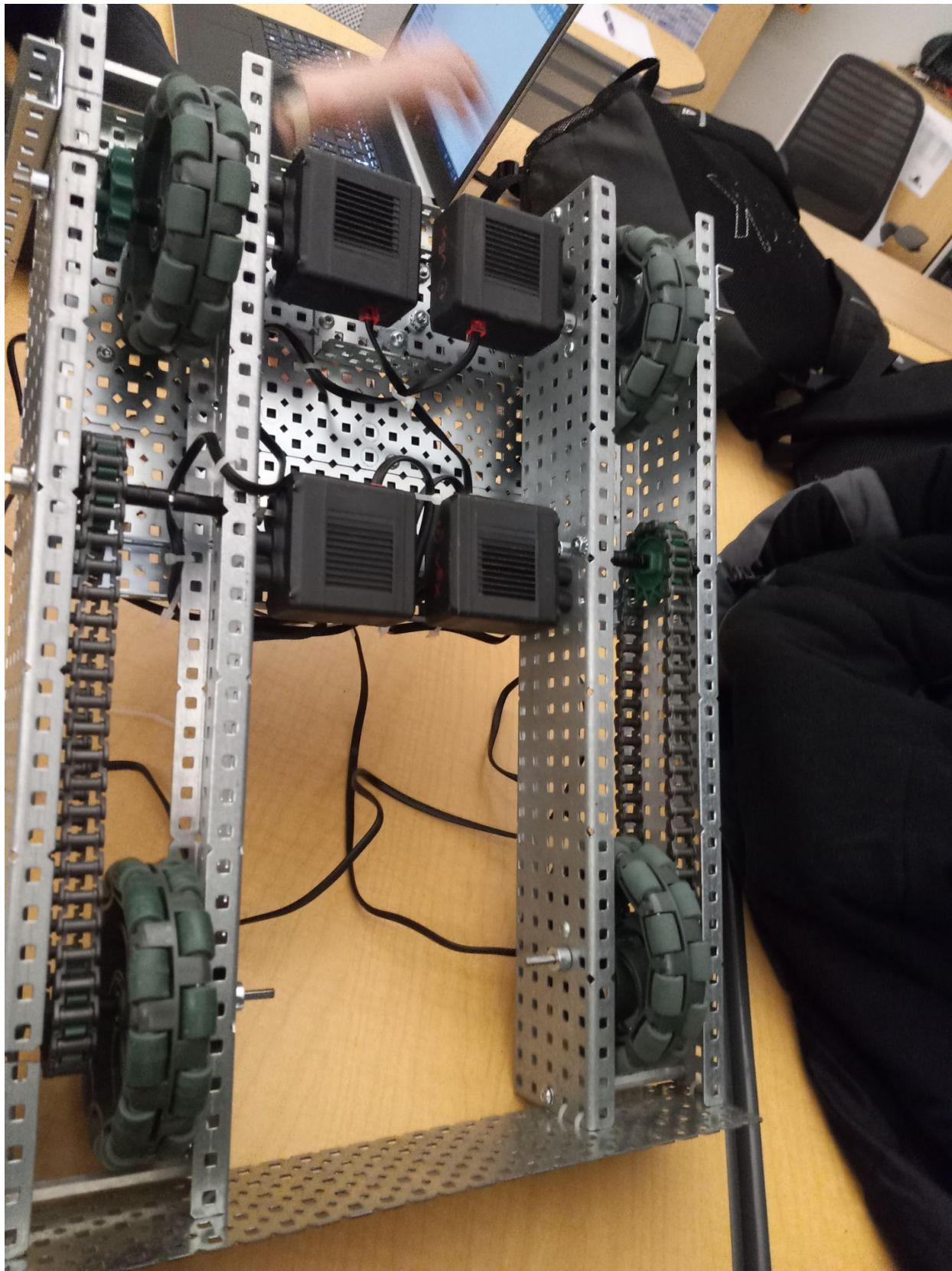
Caiden not here











Day 22

Van coding

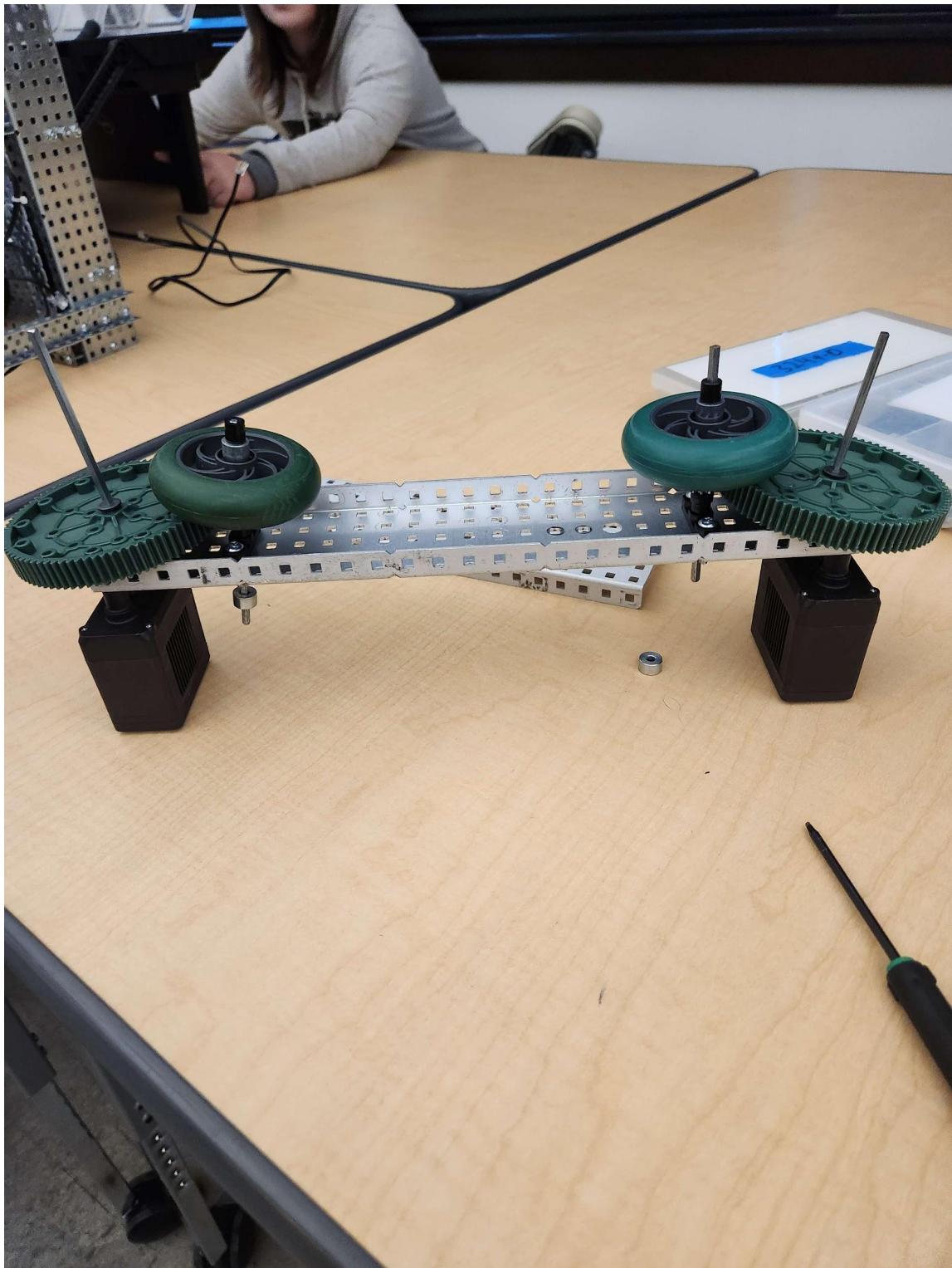
Zeyen making chassis better

Malachi making fly wheel better

Ben not here (me when braces go OW)

Caiden not here

Day 23



15(a note for me malachi)

Day 24

Van coding jornal and building

Ben coding and building

Caiden not here

Malachi not here

Zeyen not here

Day 25

Van coding jornal and building

Ben coding and building

Caiden not here

Malachi not here

Zeyen not here

Day 26

Van journal work and help ben and zeyen

Ben working on the code

Zeyen building conveyor

Malachi working flywheel

Day 27

Van helping ben

Ben building

Zeyen here but doing other work

Malachi not here

## Day 28

Van making everyone work and making the journal better

Zeyen making our robot a push robot for our first tournament

Ben changing the motors

Malachi making the fly wheel for the next couple competitions

What did we learn from competitions:

1. Slow robot.... Need to use normal motors
2. Make string launcher ASAP
3. Push bots CAN work
4. 3249 U doesn't have a flywheel (very important)
5. First competition... got further than 3249 u (skill issue)
6. logan(4591w) likes to call our robot a roller bot :(

## Day 29

Ben making motor work and not drift and fixing the robot

Van helping ben and ideas and giving them stuff

Zeyen doing homework

Malachi doing homework

Day 30

Ben making string launcher

Van making journal better

Malachi doing home work

Zeyen making fly wheel

Note: flywheel insanely sketchy.... Like INSANELY sketchy

Day 31 (Zeyen is doing this day)

Van: not here

Zeyen: doing journal and building

Ben: being epic pro co-leader and builder

Malachi: quit... :(



Added String Launcher Base  
Secured roller wheel!!  
Upgraded string launcher base+flywheel

After the rookie run, what we have learned:

- String launchers are hard to prime
- String launcher needs to keep the string in better.
- Flywheel!!!!!! Need one!!!!
- Its funny flipping other bots
- A Lot of other people are actually very nice and helpful!
- At sandy high, we got really lucky with our alliance
- We placed 17th in both tournaments

## DAY 32

Ben: working on code and auton

Van: not here

Zeyen: working on robot and journal

## Tasks:

- ~~Make auton better~~
- Make intake for the flywheel (NEED TO DO!)

- Once intake is on remove roller and replace it for the flywheel (SCRAPPED)

## DAY 33

Ben: Working on robot

Zeyen: working on journal and robot

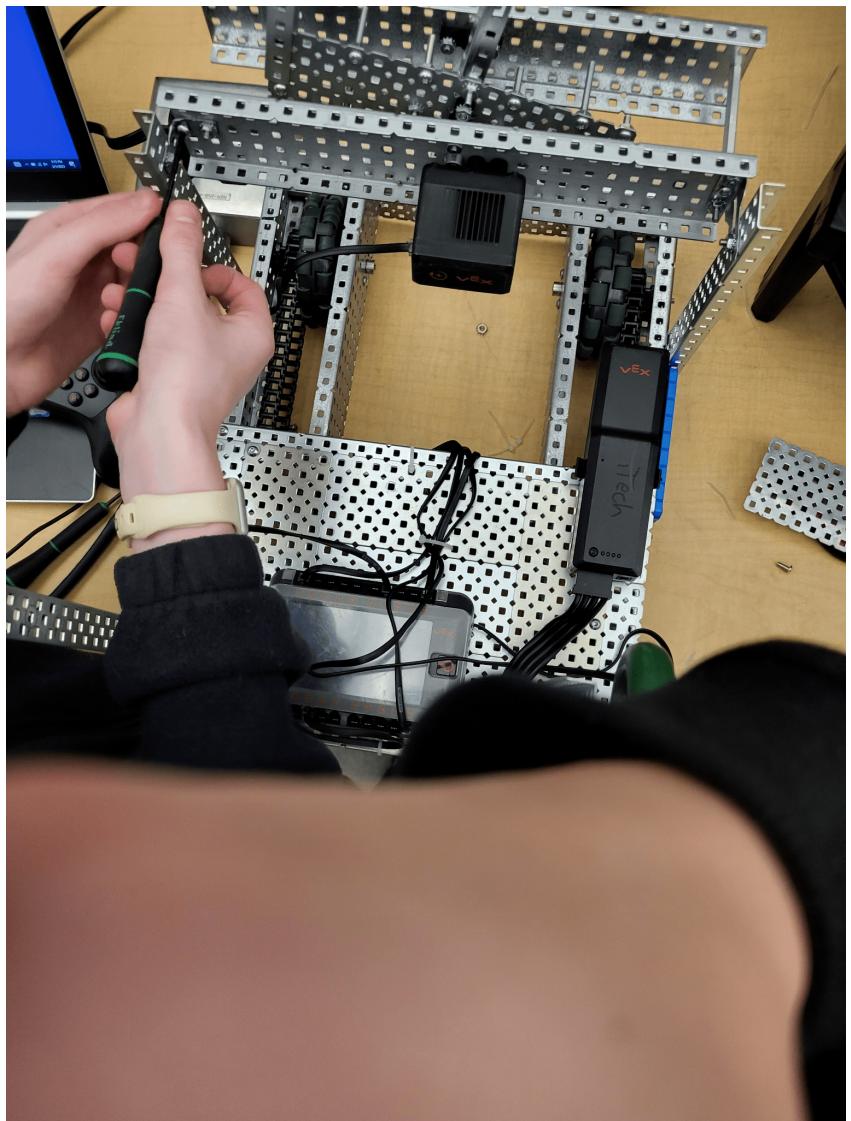
Van: .... Not here 😞

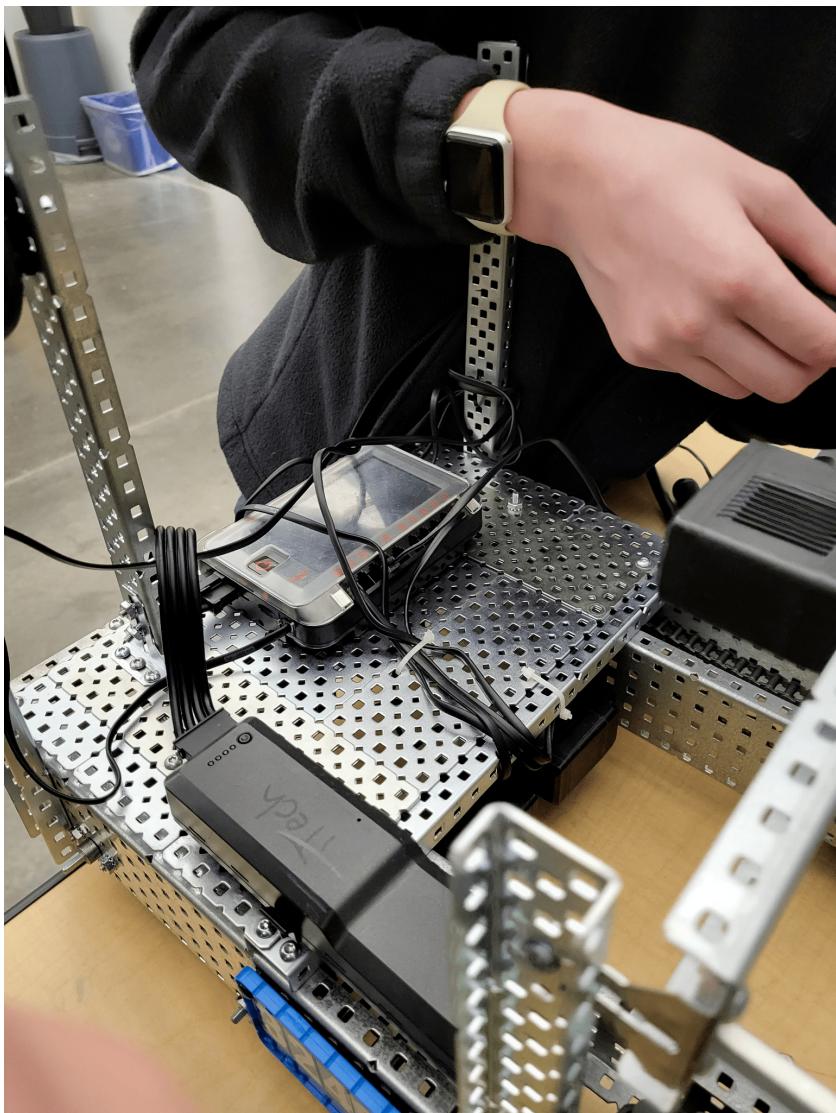
### Tasks:

- Rework flywheel
- Revamp string launcher (we gotta make it work and not let it go nowhere)
- Make intake
- ~~Wire control~~

### Design differences:

~~None~~—we moved the brain and battery for intake







Day 33...

Ben: working on code and robot

Zeyen: working on journal and robot

Van: was at school but left

**MAIN TASKS:**

- Make intake
- Rework flywheel

Differences:

None

Day 34

Van is helping Zeyen

Ben getting the string launcher to work

Zeyen gatting intake to work

Main tasks:

Make intake

Make string launcher better

Day 34

Van helping ben and Zeyen

Ben getting string launcher to work better

Zeyen making intake

MAIN TASKS:

- Intake
- String launcher

Design differences:

Intake base added!!

DAY 35:

Van: helped Zeyen and Ben

Ben: revamped flywheel

Zeyen: Tried to finish intake

## MAIN TASKS

- Ready robot for tournament

Design differences:

got rid of intake base

## TOURNAMENT:

GOT DESTROYED IN ELIMINATION ROUNDS

Learned: MAKE SURE THINGS WORK

DAY: 36

Zeyen: journal and doing basically nothing

Ben: Doing everything

Van: not here

MAIN TASKS:

- Get stuff to work
  - (not preparing for anything)

IDEAS:

- Rolling string launcher
  - IDEA FROM 3249 C
  - Scrapped

DESIGN DIFFERENCES:

- None

DAY 37: (~~possibly the final entry~~)

Van: filled with sorrow (doing random stuff)

Ben: filled with sorrow (doing random stuff)

Zeyen: filled with sorrow (doing random stuff)

## TASKS:

- Destroy bobot
- Do random stuff