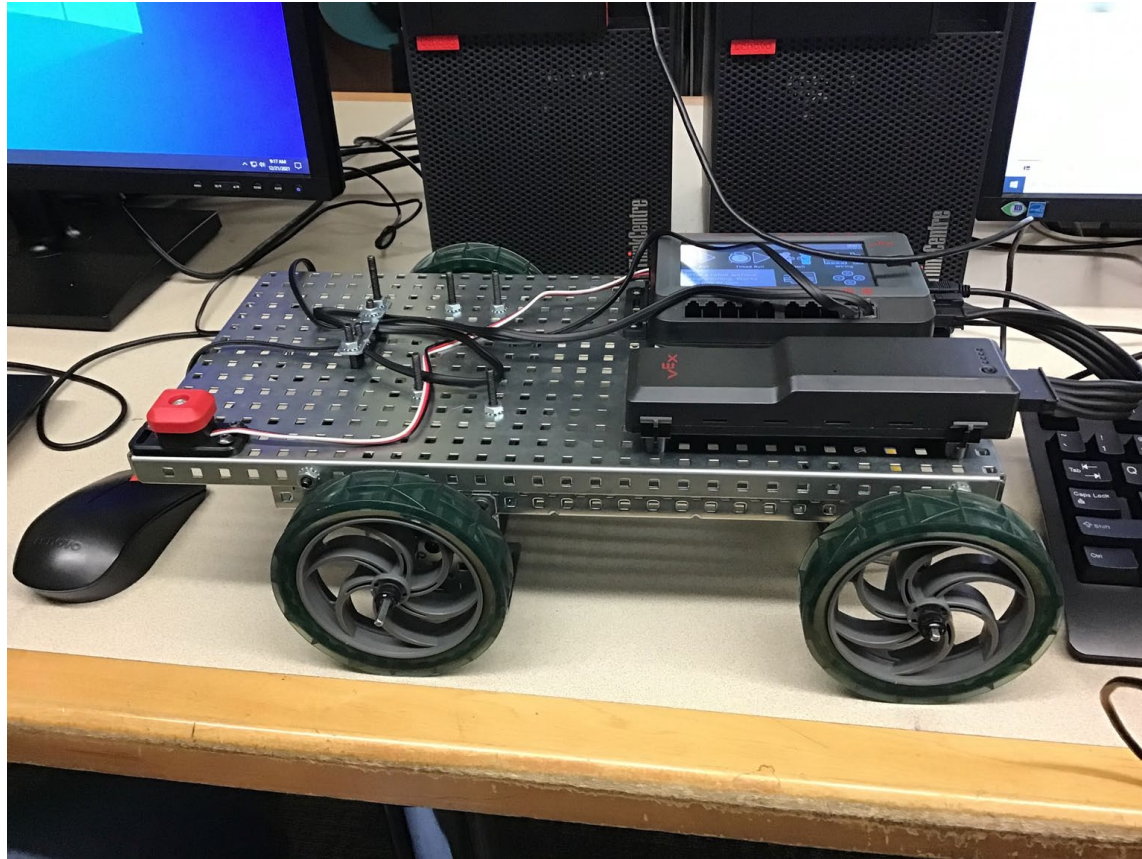


Assignment #6 Drag Race Car



Project Requirements

- Plan your design.
- Draw front, top and side views
- Show detailed plans for teacher sign off before building
- Create a Materials list
- Build your design
- Take a video of your working design and add to your notebook.
- Answer questions in PLTW: (add to your notebook)
- How effective was your team's collaboration?
- How could you improve the collaboration?
- What was your team's greatest challenge? How did you overcome it?
- Take a screenshot of the code and add it to your notebook along with a video of your working build.
- Add the conclusion questions to your notebook.
- Make a new iteration of one of your task solutions.
- How did you modify your design?
- Explain why you would make this change.
- For your task solution, explain how your solution is either an open-loop system or a closed-loop system.
- Choose resources you used to create one of your task solutions and identify the technological resource category they each fall under.

Design Plan

PLTW Gateway

Automation and Robotics

Design Plan

Project Title: Robot Drag Race

Team Members:

Stoane, Ella, Siddi

Task Description:

Design, build, and test a robot vehicle that can travel 20 feet in the least amount of time possible. Regulations require all robots include a start button.

Robot cannot use more than 2 motors

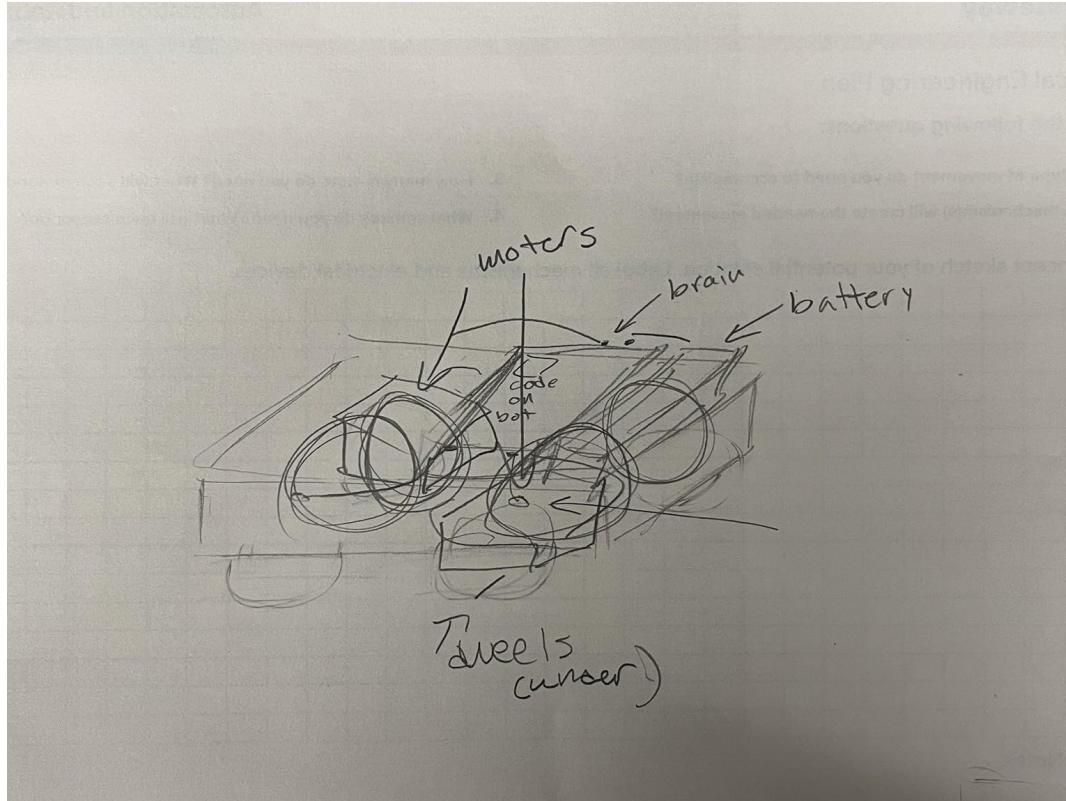
The vehicle should start moving when user presses a switch.

The robot should travel as fast as possible from start to finish line

The robot should stop after the finish line

The wiring optimizes ease of use and cord management

Concept Sketch



Design Challenge Questions

How effective was your team's collaboration?

Our team was able to work together to overcome challenges and make our design a working object.

How could you improve the collaboration?

We could not divide up as much and try to work together as a team on everything.

What was your team's greatest challenge? How did you overcome it?

Our greatest challenge was having our gear not be able to be engaged. We overcame this by surrendering the idea of using gears and just using two motors to move our car.

Task Solution Questions

How did you modify your design?

We had to make our wheels lower to the ground.

Explain why you would make this change.

We made this change because we could accommodate for the two motors on the front wheels.

Make a new iteration of one of your task solutions.

We used a bump switch to start our code.

For your task solution, explain how your solution is either an open-loop system or a closed-loop system.

Our code is a closed loop system because the output, making the wheels go, is dependent on the input, the act of pressing the bump switch to start the code.

Task Solution Questions (continued)

Choose resources you used to create one of your task solutions and identify the technological resource category they each fall under.

At first we used photos of cars to try and make our wheels move, but that didn't work so we had to put a motor on each front wheel.

Video of Drag Race Car

