Paper Football launcher

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13.5:1 Gear Ratio!

Red: 16 tooth gear (Slave)

Orange: 54 tooth gear (master)

Yellow: 3-D printed football kicker, spins at high rpm in order to launch or kick the paper football.

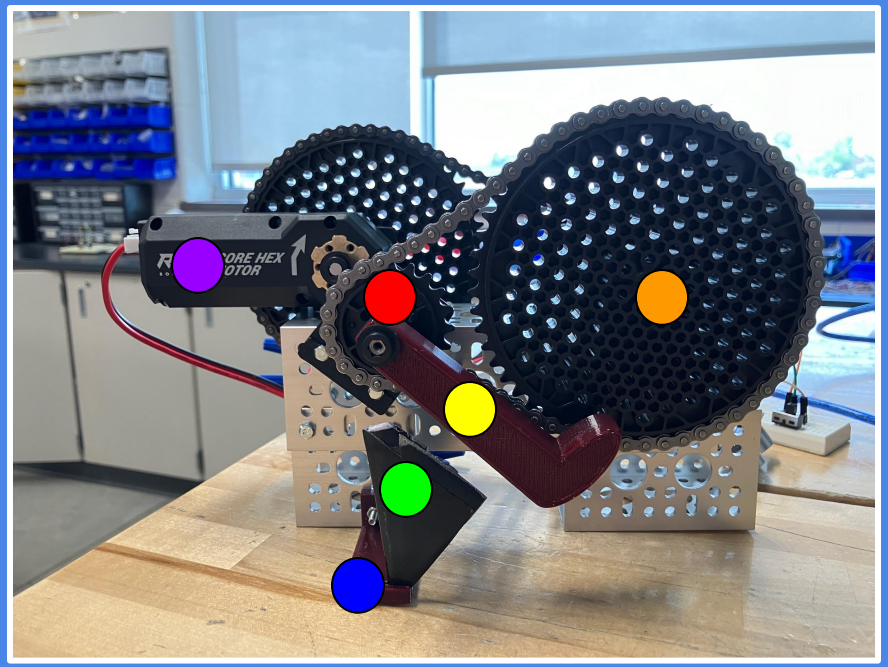
Green: Paper football made out of paper and some tape

Blue: 3-D printed football holder

Purple: REV core hex motor

Also: 12v battery, REV U-Channel, Arduino Uno, Motor controller, Power switch

Top of box: Scoreboard up to 3 points each team, power switch.



We learned how to fix many things throughout this project, some issues we had were, scoreboard not functioning like we planned, distance sensor not functioning, not enough speed to launch the football, and basic wiring issues.

Device Summary:

This device is a paper football launcher/opponent. You can play against it or use it to win. This device will launch paper footballs into the opponents goal using a distance sensor to tell how far away that goal is and interpret that signal to launch the football and score every time.

Meeting expectations:

Output display: scoreboard using Led lights.
Manual user input: Scoreboard button input, power switch.
Automatic Sensor: distance sensor.
Actuators: REV motor, Gears and chains, 3-D printed parts.
Logic Control: Programmed logic into code, multiple microcontrollers.