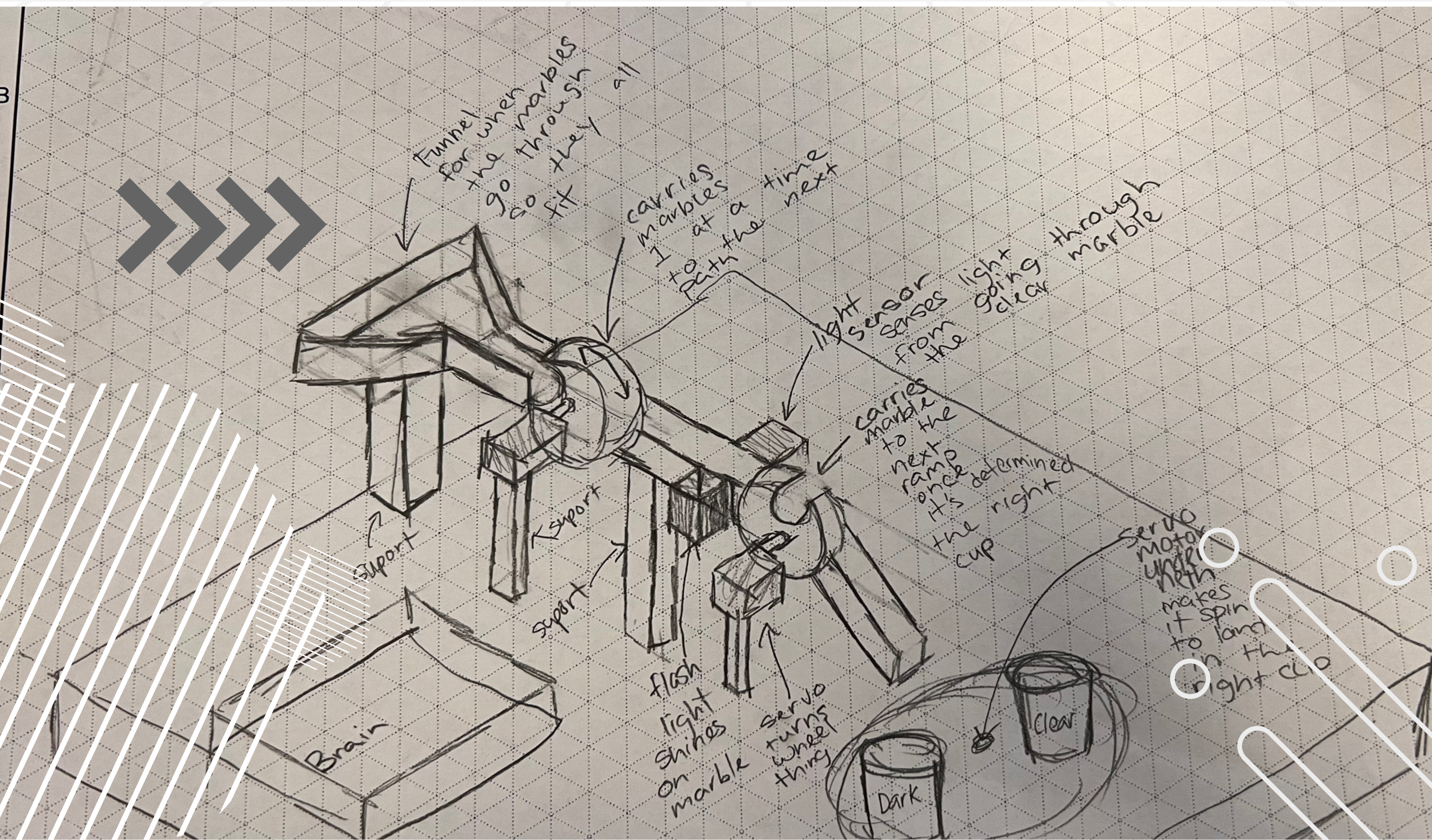
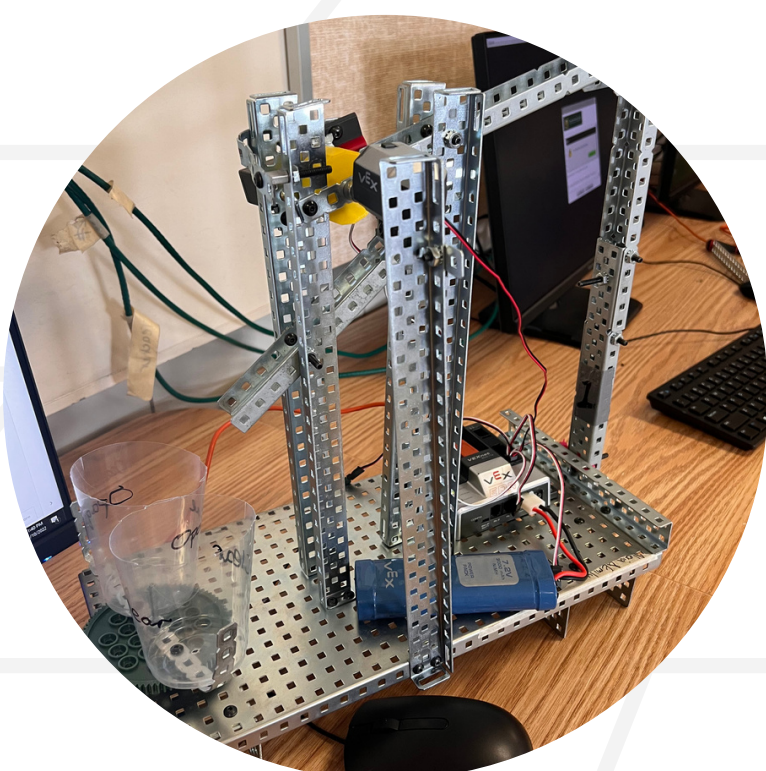


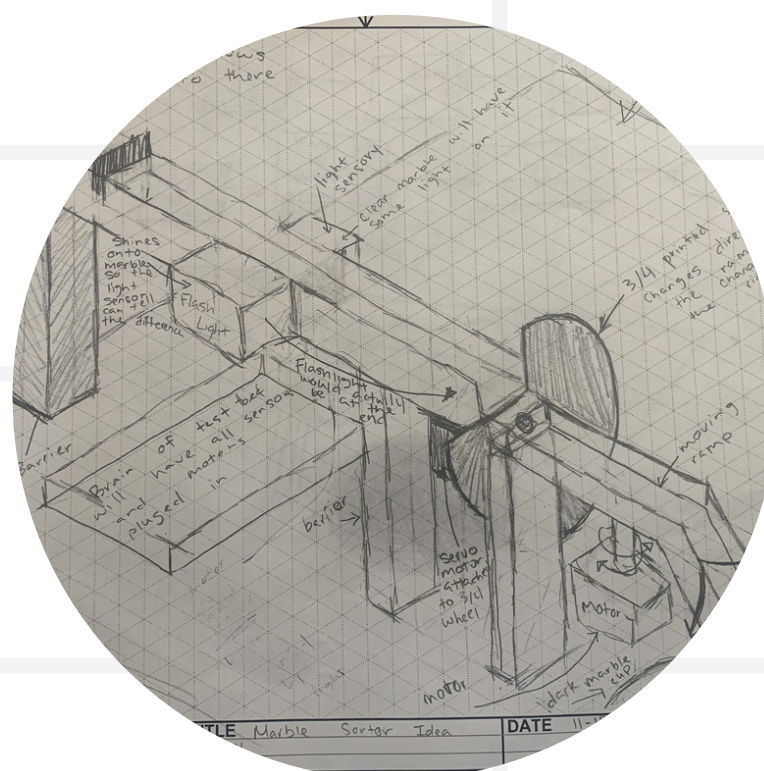
2022 PRINCIPLES OF ENGINEERING – MARBLE SORTER PROJECT



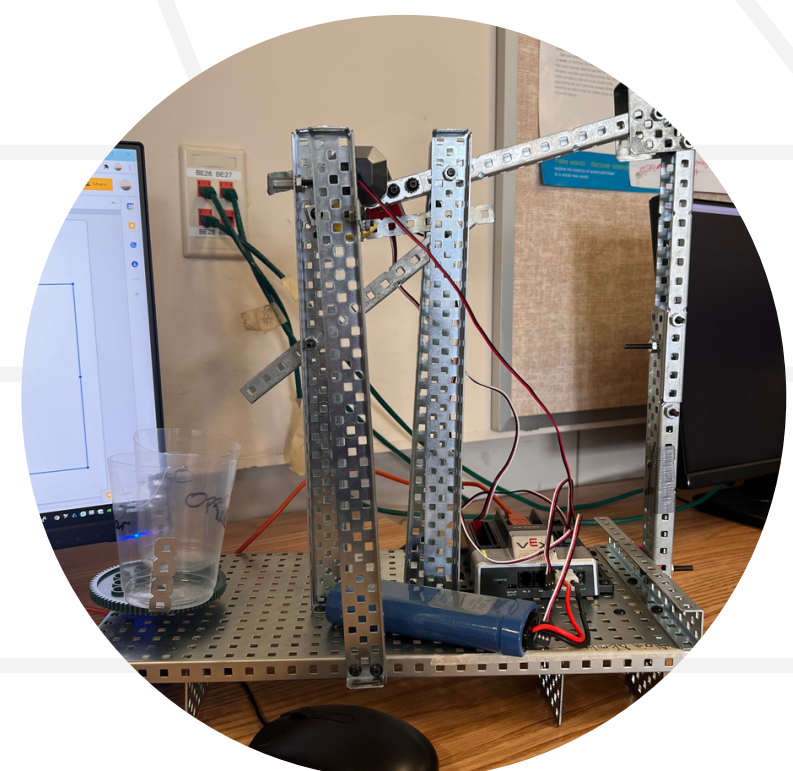
This PLTW Principles of Engineering project required the design, construction, and programming of an automated system to sort marbles. The primary objective was to use sensors to detect a specific property of a marble, such as its material or color. Using this sensor data, the machine's VEX microcontroller had to process the information and actuate a custom 3D-printed sorting mechanism. The system was constrained to using the VEX robotics platform and was required to accurately and autonomously divert at least two different types of marbles into separate collection cups.



**VEX ROBOTICS
PLATFORM**



AUTODESK INVENTOR



**MICROCONTROLLER
PROGRAMMING**