***PLTW*-IT-8-Automation and Robotics w/ Mr. Falk:**

Students use the VEX Robotics® platform to build different Robots. They also write Program Code to program real-world robots such as dragster cars, traffic lights, elevators, robotic arms, and mobile robots. Students learn about writing computer code, machine automation, and computer control systems.

Activities:

What Use Robots For-A look at how Robots are used

Understanding Robots-A look at Milli-Bots, Surgical Robots, Virtual Bots

Mechanisms Review Game-A fun Review of Mechanisms

Observing Mechanisms-Identifying Mechanisms

Building With VEX-Building Mechanisms with VEX Robotics

Mechanical Gears Construction-Testing Mechanisms with VEX Robotics

Windmill Construction-You will Design and Construct a Windmill

Pull Toy Construction-You will Design and Construct a Wheeled Toy

Rough Terrain Vehicle Construction-You will Design and Construct an Off-Road 4x4 Vehicle

Drag Car Construction -You will Design and Construct a Race Car to Race against your peers

Solar Dish Construction-You will Design and Construct a Solar Collector

Heavy Equipment Vehicle Construction-You will Design and Construct a Vehicle to move Heavy Loads

Survival Machine Construction-You will Design and Construct a machine to Pump Water, Cut Wood, and Grind Wheat

Writing Pseudocode-You will Design and Write Code Language to control Robots

ROBOTC -You will Design and Write Code to control Robots Autonomously and with Joystick

Automation through Programming -You will Design and Write Code to control Multiple Processes

Simulated Factory Assembly Line Construction -You will Design and Build an Assembly Line