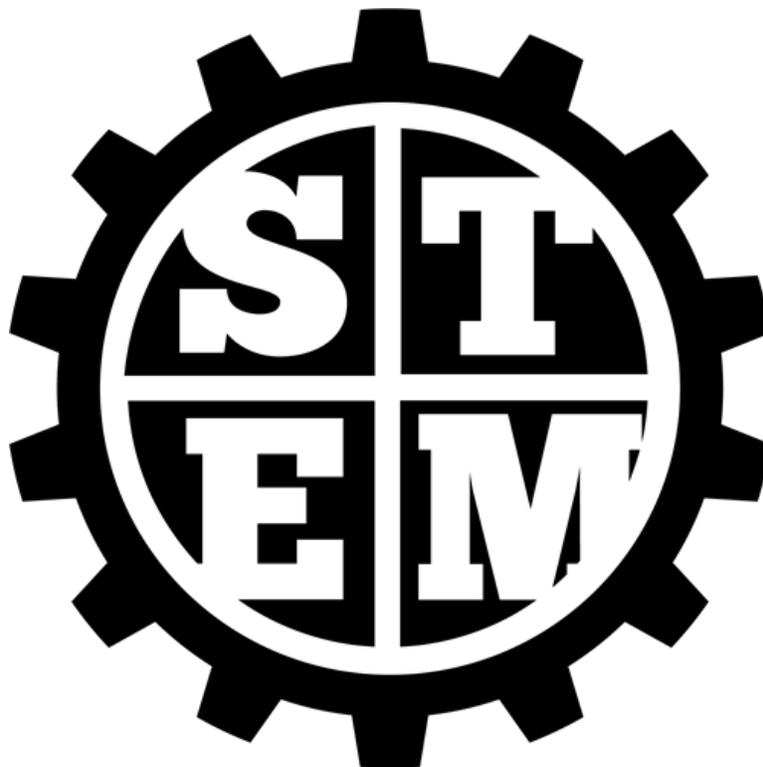# Loudonville JH/HS

STEM courses

Junior High STEM Courses

Project Lead the Way Gateway Program(7-8)

Flight and Space (Mr. Jim Gale)

The exciting world of aerospace comes alive through Flight and Space. Students explore the science behind aeronautics and use their knowledge to design, build, and test an airfoil.

Medical Detectives(Ms. Kori Aubel)

Students play the role of real-life medical detectives as they analyze genetic testing results to diagnose disease and study DNA evidence found at a "crime scene." They solve medical mysteries through hands-on projects and labs, investigate how to measure and interpret vital signs, and learn how the systems of the human body work together to maintain health.

Design and Modeling(Mr. Jay Bitner)

Students discover the design process and develop an understanding of the influence of creativity and innovation in their lives. They are then challenged and empowered to use and apply what they've learned throughout the unit to design a therapeutic toy for a child who has cerebral palsy.

Automation and Intro to Robotics(Mr. Jay Bitner)

Students learn about the history and impact of automation and robotics as they explore mechanical systems, energy transfer, machine automation, and computer control systems. Using the VEX Robotics® platform, students apply what they know to design and program traffic lights, robotic arms, and more.

High School STEM Courses

Project Lead the Way Engineering Program(9-12)

Introduction to Engineering Design(Mr. Ron Lance)

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects like designing a new toy or improving an existing product.

Principles of Engineering(Mr. Josh Miller)

Students explore a broad range of engineering topics including mechanisms, strength of structure and materials, and automation, and then they apply what they know to take on challenges like designing a self-powered car.

Digital Electronics(Mr. Jay Bitner)

Students explore the foundations of computing by engaging in circuit design processes to create combinational logic and sequential logic (memory) as electrical engineers do in industry.

Engineering Design and Development(Mr. Dan Weber)

Students identify a real-world challenge and then research, design, and test a solution, ultimately presenting their unique solutions to a panel of engineers.

Robotics Competition Lab(Mr. Josh Miller)

Students sketch, design, and build competition Vex robots using all of the previously learned concepts throughout the engineering curriculum and then compete throughout the school year for a chance at the state championships and world championships.

LOUDONVILLE

ROBOTICS

PLTW
PROJECT LEAD THE WAY
Preparing students for the global economy

VEX ROBOTICS COMPETITION