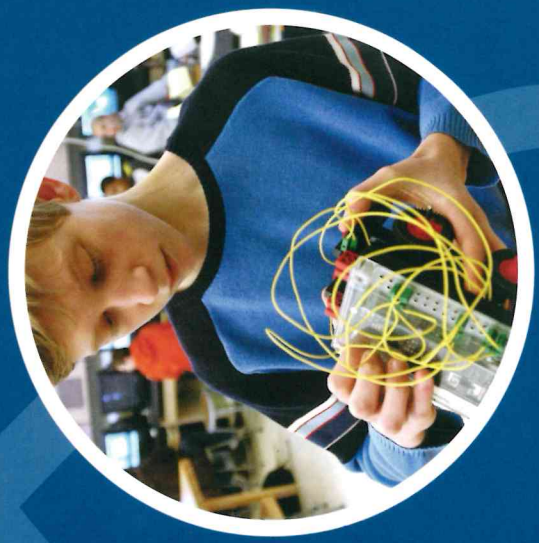


Engineering

PROJECT LEAD THE WAY PLTW

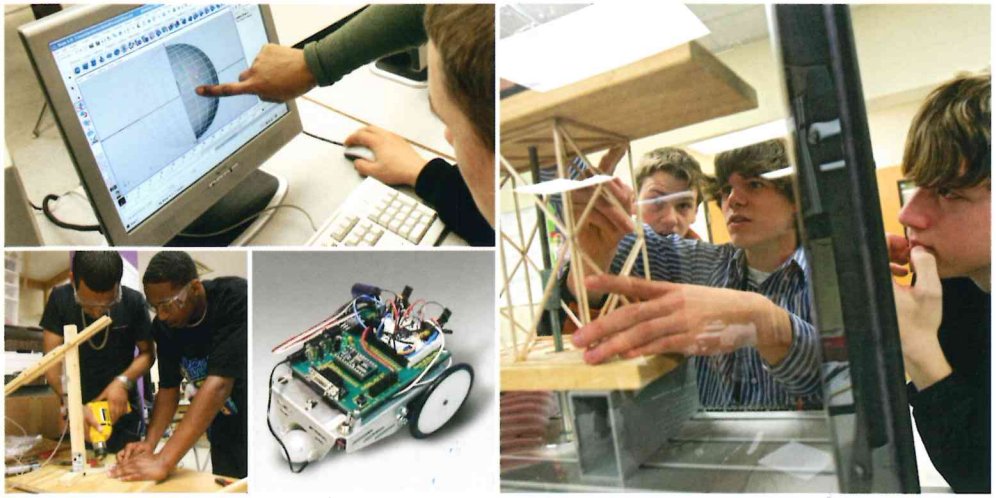
InnovationHS Engineering for High Schools

Igniting Innovation through imagination and learning.

Project Lead The Way (PLTW) prepares students to be the most innovative and productive leaders in science, technology, engineering, and mathematics (STEM) and to make meaningful, pioneering contributions to our world. PLTW partners with middle schools and high schools to provide a rigorous, relevant STEM education. Through an engaging, hands-on curriculum, PLTW encourages the development of problem-solving skills, critical thinking, creative and innovative reasoning, and a love for learning. The PLTW middle and high school STEM education programs give students a brighter future by providing them with a foundation and proven path to college and career success in STEM-related fields. STEM education is at the heart of today's high-tech, high-skill global economy.

www.pltw.org

For more information contact your school counselor and don't forget to ask about PLTW's Biomedical Sciences Program, too!



The **PLTW Pathway To Engineering Program** is a curriculum that is designed to encompass all four years of high school. Foundation courses are supplemented by a number of electives to create nine rigorous, relevant, reality-based courses. **Activities are hands-on and project-based**. Students learn how to use the same industry-leading 3D design software that's used by companies like **Intel, Lockheed Martin and Pixar**. They explore aerodynamics, astronautics and space life sciences. **Hello, NASA**. They apply biological and engineering concepts related to biomechanics – **think robotics**. Students design, test, and actually construct circuits and devices such as **smart phones and tablets**, and work collaboratively on a culminating capstone project. Some PLTW students have even **received US patents**.

GC — **Global Challenges**
A new offering that introduces students to STEM fields while they design their own solutions for challenges like clean water and resource sustainability.

IED — **Introduction to Engineering Design**
3D computer modeling software; study of the design process.

POE — **Principles Of Engineering**
Exploration of technology systems and engineering processes.

DE — **Digital Electronics**
Use of computer simulation to learn the logic of electronics.

AE — **Aerospace Engineering**
Aerodynamics, astronautics, space-life sciences, and systems engineering.

BE — **Biotechnical Engineering**
Biomechanics, genetic engineering, and forensics.

CEA — **Civil Engineering & Architecture**
Students collaborate on the development of community-based building projects.

CIM — **Computer Integrated Manufacturing**
Robotics and automated manufacturing; production of 3-D designs.

EDD — **Engineering Design & Development**
Teams of students, guided by community mentors, research, design, and construct solutions to engineering problems.