PROJECT LEAD THE WAY
PLTW

OVERVIEW

Igniting imagination and innovation
through learning.

MISSION

Project Lead The Way's (PLTW) mission is to ensure that America succeeds in the increasingly high-tech and high-skill global economy by partnering with middle schools and high schools to prepare students to become the most innovative and productive in the world.

OVERVIEW

PLTW is the nation's leading provider of rigorous and innovative Science, Technology, Engineering and Mathematics (STEM) education for middle schools and high schools. PLTW's comprehensive curriculum, which is collaboratively developed by PLTW teachers, University educators, engineering and biomedical professionals, and school administrators, emphasizes critical thinking, creativity, innovation, and real-world problem solving. The hands-on, project-based program engages students on multiple levels, exposes them to areas of study that they typically do not pursue, and provides them with a foundation and proven path to college and career success in STEM related fields.

HISTORY AND IMPACT

PLTW began in 1998 in 12 high schools in upstate New York as a program designed to address the shortage of engineering students at the college level. The non-profit organization has grown to a network of approximately 4,000 middle and high schools in 50 states and the District of Columbia enrolling more than 350,000 students. More than 500,000 students across the country have taken at least one PLTW course and approximately 13,000 teachers have been trained to teach PLTW courses.

RESULTS

- PLTW alumni are studying engineering and technology at five to ten times the average rate of all students.
- PLTW students have a higher retention rate in college engineering, science, and related programs than other students in those areas.
- 97% of PLTW seniors intend to pursue a 4-year degree or higher, whereas the national average is 67%.
- 80% of PLTW seniors say they will study engineering, technology, or computer science in college, whereas the national average is 32%.
- PLTW students achieve significantly higher scores in reading, mathematics, and science than Career and Technical Education (CTE) students in the same schools in similar CTE fields.

THE PLTW NETWORK

PLTW teachers and school counselors are able to access a nationwide support network comprised of PLTW's national staff, master teachers, and state leaders (education professionals employed by state Departments of Education). PLTW has more than 35 affiliate colleges and university partners that offer students credit for completing certain PLTW courses in high school. These universities also provide an intensive 2-week professional development course during the summer that PLTW teachers are required to complete before teaching a PLTW

course. PLTW's nationally recognized technology, engineering and science partners, corporate sponsors, and philanthropic supporters offer materials, technology, equipment, and grants, as well as internships that allow students to see firsthand how what they are learning in the classroom applies to the real world.

NATIONAL RECOGNITION

The U.S. Department of Education recommended PLTW as an exemplary program in 2004 for: (i) integrating rigorous and relevant STEM curricula and professional development; and (ii) improving student achievement in mathematics, science, and English language arts.

The National Academy of Engineering, the National Academy of Sciences, and the Institute of Medicine recognized PLTW in a 2005 report, Rising Above the Gathering Storm: Engaging and Employing America for a Brighter Economic Future, as a model for its recommendation of creating "K-12 curriculum materials based on world-class standards."

U.S. Secretary of State Hillary Clinton introduced PLTW to her fellow Senators in a 2005 letter in which she described PLTW as a "promising program that is both changing the lives of middle and high school students nationwide and helping to build a workforce that meets the needs of the 21st century."

The Aerospace Industries Association (AIA) and the National Defense Industry Association (NDIA), the premier trade associations representing the nation's major aerospace and defense manufacturers, officially endorsed PLTW in 2006.

CURRICULUM & APPROACH

PLTW's approach, called activities-, project-, and problem-based (APPB) learning, centers on hands-on, real-world projects that help students understand how the information and skills they are learning in the classroom may be applied in everyday life. PLTW's programs are comprehensive and turnkey. The curriculum is standards-based, yet flexible and customizable so that schools and school districts can meet their curricular needs. PLTW offers three different programs:

PLTW Gateway To Technology (GTT) is a middle school program offered in six independent, nine-week units and is designed to help students explore math, science, and technology. This activity-oriented program challenges and engages the natural curiosity of middle school students and is taught in conjunction with a rigorous academic curriculum.

PLTW Pathway To Engineering (PTE) is a four-year high school sequence taught in conjunction with traditional math and science courses. PTE's eight courses, including Digital Electronics and Civil Engineering and Architecture, provide students with in-depth, hands-on knowledge of engineering and technology-based careers.

PLTW Biomedical Sciences Program (BMS) introduces high school students to the human body, cell biology, genetics, disease, and other biomedical topics in a sequence of four courses. The program prepares students for the postsecondary education and training necessary for success in a wide variety of positions, including physician, nurse, pharmaceutical researcher, and technician.