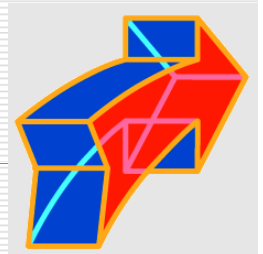


Project Lead The Way

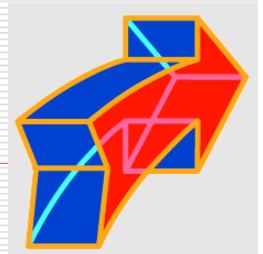
“Forging New
Generations of Engineers”

PLTW is
a 501 (c) (3)
not-for-profit
corporation

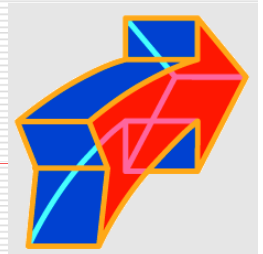


Project Lead the Way (PLTW)

- **A national program with a mission to grow the number of engineers and technicians in this country by promoting and supporting the teaching of pre-engineering in K-12 classrooms**
- **The courses are rigorous, relevant and project-based and complement the traditional math and science curriculum needed for students preparing to enter a college engineering program.**
- **Over 250,000 students are currently in the PLTW program with over 2,300 participating schools.**

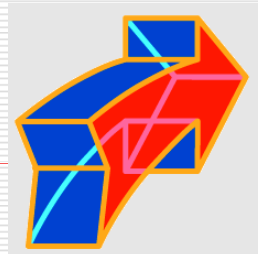


PLTW works with schools to implement an instructional program to prepare students to be successful in post secondary engineering and engineering technology programs.



The primary goal

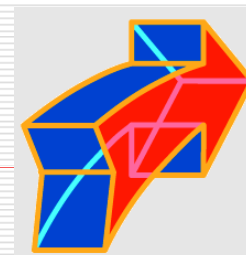
of PLTW is to
grow the nation's
technology
workforce.



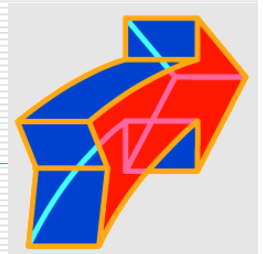
STEM Crisis

- In 2003, there were 1,300,000 engineering/engineering technology jobs available in the U.S. without trained people to fill them.
- Between 1980 and 2000 the number of nonacademic science and engineering jobs increased by 159%.
- The total number of retirements among S&E-degreed workers will increase dramatically over the next 20 years because the 40- 44 age group is nearly four times as large as the 60-64 age group.
- Any sustained drop in S&E degree production would produce not only a slowing of labor force growth, but also a long-term decline in the S&E labor force.

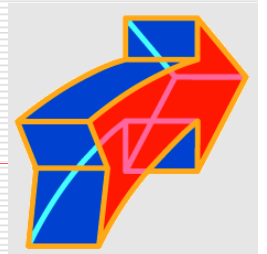
Source: National Science Foundation 2004 study



We are not
graduating enough
engineers and
technicians.



How does PLTW
contribute to this
national vision?

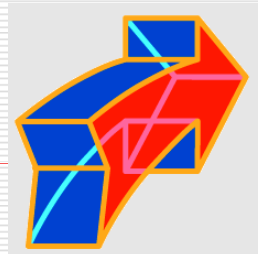


By providing
curriculum and
professional
development.

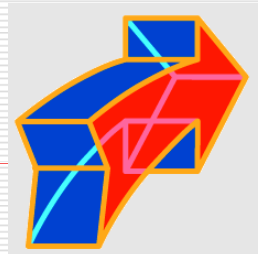


PLTW Mission

Create dynamic partnerships with our nation's schools to prepare an increasing and more diverse group of students to be successful in engineering and engineering technology programs.

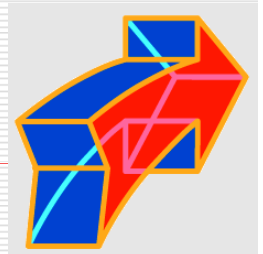


**How does PLTW
facilitate this change
in the schools?**



Attributes of a PLTW curriculum:

- Is contextual project/problem based
- Integrates national standards in mathematics, science, technology, and English/language arts
- Has breadth and depth of content
- Is supported by comprehensive professional development for teachers
- Professional Development Conferences for School Counselors
- Prepares students for successful transition to college – into all 2/4 year programs
- Develops the engineering/engineering technology pipeline
- Is sustained and updated through a private not-for-profit foundation



Middle School Program:

Gateway To Technology

- Design and Modeling (9 wks)
- The Magic of Electrons (9 wks)
- The Science of Technology (9 wks)
- Automation and Robotics (9 wks)
- Environmental Engineering (9 wks)
- Flight and Space (9 wks) NASA

High School Course Program

Foundation: **Introduction to Engineering Design**
Principles Of Engineering
Digital Electronics

Specialization: **Computer Integrated Manufacturing**
 Civil Engineering and Architecture
 Biotechnical Engineering
 Aerospace Technology

Capstone: **Engineering Design and Development**

Note: Course program requires college prep mathematics each year.



Graduation Expectations

- ❑ Understand technology as a tool for **problem solving**.
- ❑ Understand the scientific process, **engineering problem solving** and the application of technology.
- ❑ Be prepared for the **rigor of college level Engineering or Engineering Technology programs**.
- ❑ Understand, technological **systems** as they interface with other systems.



Graduation Expectations

- ❑ **Use the principles of mathematics** in their application to problem solving.
- ❑ **Communicate effectively** using reading, writing, listening and speaking.
- ❑ **Demonstrate the ability to work in teams.**

