

PROJECT LEAD THE WAY (PLTW)

Parent Organization: NA

Web Address: <http://www.pltw.org/aindex.htm>

Grade/Age Levels/Target Audience: Equal opportunity for middle and high School students; no regard for gender or ethnic background

Overview: Project Lead The Way Inc. (PLTW) is a national program forming partnerships among Public Schools, Higher Education Institutions and the Private Sector to increase the quantity and quality of engineers and engineering technologists graduating from our education system. First developed in the 1980's PLTW is now offered in over 42 states and the District of Columbia. (Source: <http://www.pltw.org/AUHistory.shtml>)

Subjects Covered: (Source: <http://www.pltw.org/overview.shtml>)

High School Level

- Introduction to Engineering Design
- Digital Electronics
- Principles of Engineering
- Computer Integrated Manufacturing
- Civil Engineering and Architecture
- Biotechnical Engineering (in development)
- Aerospace Engineering (in development)
- Engineering Design and Development

In addition, PLTW has developed an exciting Middle School Technology Curriculum: Gateway To Technology. This project-based, cutting edge curriculum is 40 weeks in length and is divided into four 10-week units in the following subjects: Design and Modeling; The Magic of Electrons; The Science of Technology; Automation and Robotics; and three new units in development: including Environmental Engineering, Energy and the Environment, and Aerospace Engineering.

Size of Program: Today, the programs are offered in over 1,000 schools in 42 states and the District of Columbia.

Where Offered: Same as above

Time Spent by Students: The High School Program is a four year sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering prior to entering college.

The Gateway to Technology program is "activity oriented." The four instructional units excite and motivate students to use their imaginations and teach them to be creative and innovative, while gaining the skills they need to develop, produce and use products and services.

Partners/Sponsors: Current university affiliates include: Rochester Institute of Technology, Purdue, University of Houston, Duke, San Diego State, University of New Haven, Penn State, University of South Florida, Weber State, Univ. of South Carolina,

Univ. of Colorado, Colorado Springs, Old Dominion, Oregon Institute of Technology, University of Illinois, among others.

Format: See “Time Spent” above.

Materials Available on Web and/or Purchase: Sample curriculum, lab design examples, sample exams available on web site

Training – Avail/Required: A self-assessment test and The Summer Training Institute is required for teachers using PLTW curriculum in their classes.

Results to Date: NA

Cost structure: NA

Funding: The school pays for computers, equipment, supplies, software and professional development costs. A breakdown of these costs can be found at:

<http://www.pltw.org/costest.shtml>

In Oregon, two schools have been teaching PLTW curriculum for the past 2 years, North Eugene and North Salem (doc 3.21) High Schools. Six additional high school teachers were sent to training this past summer and will begin teaching PLTW curriculum this coming year. These teachers were from Lebanon High School, Sabin-Schellenberg Center, and Clackamas Community College. (*Source: Tim Brower, Department Chair, Mechanical Engineering, OIT*)