Welcome to Core Training
University of South Carolina
College of Engineering and Computing
2015 Summer Core Training
Pathway To Engineering
Sites in 2014-2015

Affiliated Postsecondary Institutions

Enrollment
10,000 +
47 Districts
101 High Schools
Gateway to Technology
Sites for 2014-2015

Enrollment
10,000+

106 registered GTT sites
PLTW is the nation’s leading provider of K-12 STEM education programs.

*Project Lead The Way’s mission:* Prepare students for the global economy.
About Project Lead The Way

World-Class Curriculum

High-Quality Professional Development

Engaged Network
PLTW’s K-12 Curricular Pathways

Kindergarten through fifth grade

Middle school

High school

PLTW Launch

PLTW Gateway

PLTW Biomedical Science

PLTW Computer Science

PLTW Engineering

Post-secondary, career, and future success
Making a Difference in Students’ Lives

PLTW contributes to a strong, positive impact on mathematics and science achievement and offers a pathway to prepare and motivate students to enter careers in science and engineering.

Recent studies have shown:

High school graduates who participated in PLTW were nearly three times as likely to major in STEM, and 3 to 4 times more likely to study engineering, versus non-PLTW graduates.

PLTW students are more prepared for and attended higher education institutions at a higher rate and scored higher on the state’s mathematics assessment.

Many engineering universities report high and increasing levels of PLTW student enrollment.

More research about PLTW: pltw.org/about-us/our-impact
Engaging, Inspiring, Empowering
PLTW Programs

Launch
Offered in ten-hour modules, engages students in analysis, collaboration, creative thinking, and problem solving as they explore a wide range of topics.

Gateway
Offered in nine-week units, inspires critical thinking to explore STEM careers through topics such as energy, robotics, healthcare, and architecture.

Biomedical Science
Offered in full-year courses, investigates biomedical careers through concepts such as human medicine, physiology, genetics, microbiology, and public health.

Computer Science
Offered in full- and half-year courses, develops computational thinking skills and through concepts including coding, data mining, big data, and cybersecurity.

Engineering
Offered in full-year courses, explores the engineering design process by linking STEM principles to real-world problem solving in various engineering fields.
PLTW Launch
percent of scientists and graduate students in a 2010 study stated that their interest in science began before middle school.
• Kindergarten
  • Structure & Function: Exploring Design
  • Pushes and Pulls
  • Structure & Function: Human Body
  • Animals & Algorithms

• First Grade
  • Light and Sound
  • Light: Observing the Sun, Moon, and Stars
  • Animal Adaptations
  • Animated Storytelling

• Second Grade
  • Materials Science: Properties of Matter
  • Materials & Science: Form & Function
  • The Changing Earth
  • Grids & Games

• Third Grade
  • Stability & Motion: Science of Flight
  • Stability & Motion: Forces & Interactions
  • Variation of Traits
  • Programming Patterns

• Fourth Grade
  • Energy: Collisions
  • Energy: Conversion
  • Input/Output: Computer Systems
  • Input/Output: Human Brain

• Fifth Grade
  • Robotics & Automation
  • Robotics & Automation: Challenge
  • Infection: Detection
  • Infection: Modeling & Simulation
PLTW Gateway

Nine-Week Independent Units:
• Design and Modeling
• Automation and Robotics
• Energy and the Environment
• Flight and Space
• Green Architecture
• Introduction to Computer Science 1 and 2
• Magic of Electrons
• Medical Detectives
• Science of Technology
PLTW Biomedical Science

Full-Year Courses:
• Principles of Biomedical Science
• Human Body Systems
• Medical Interventions
• Biomedical Innovations
PLTW Computer Science

Courses:
• Introduction to Computer Science (0.5 year)
• Computer Science and Software Engineering (1 year)
• Computer Science Applications (1 year)
• Simulation and Modeling (0.5 year)
• Artificial Intelligence (0.5 year)
• Cybersecurity (0.5 year)
• Computational Problem Solving (1 year)
PLTW Engineering

Full-Year Courses:
• Introduction to Engineering Design
• Principles of Engineering
• Digital Electronics
• Aerospace Engineering
• Civil Engineering and Architecture
• Computer Integrated Manufacturing
• Computer Science and Software Engineering
• Engineering Design and Development
• Environmental Sustainability
PLTW Professional Development

Three phases:

- Readiness Training
- Core Training
- Ongoing Training

- Conducted in partnership with nearly 60 colleges and universities across the country.
- More than 6,000 teachers trained in 2014.
Professional Learning Community

- Connect with other professionals from across the nation and share experiences and expertise
- Build a supportive network that can positively impact both instructional practice and student learning
- Share practices with colleagues around the country and benefit from application of knowledge and skills
PLTW Resources and Support

Robust Support

Community Resources

Student Opportunities
College Board and PLTW have partnered to offer new opportunities for ALL students to become college AND career ready.

Key elements:
- Connecting AP courses and PLTW programs to create college and career pathways in Engineering, Biomedical Science, and Computer Science that will emphasize applied learning.
- New recognition credentials for students and schools in each pathway.
- A portfolio of career-focused opportunities sponsored by key industry partners including work-based learning, mentorship, scholarships, and more.

More information will be available in the coming months. Check PLTW.org and review PLTW newsletters for updates.
PLTW Student Opportunity through STEM Premier

- PLTW students can create a free profile and showcase their best work, brand themselves, and connect to colleges and companies based on their skills and interests.
- Available at no cost to PLTW middle and high school students (ages 13 and older).
- Students sign up through myPLTW.org.

**Showcase Your Talent**

STEM Premier and Project Lead The Way have partnered to help PLTW students show off their STEM skills.

STEM Premier® is providing its premium level service at no cost to PLTW middle and high school students (ages 13 and older) who are currently enrolled in, or have completed a course within PLTW Gateway, PLTW Engineering, PLTW Biomedical Science and/or PLTW Computer Science.

**Benefits To PLTW Students**

- **Organization**
  Students build virtual portfolios which grow and strengthen as they progress through their academic careers toward next steps.

- **Scholarships**
  Students will have access to an ever-growing collection of exclusive STEM scholarships.

- **Guidance**
  We offer recommendations and resources to foster career growth and help students optimize their individualized profiles.

- **Analysis**
  STEM Premier® evaluates individual achievements and shares competitive data on state and national levels.

- **Recognition**
  Students can display earned badges, accomplishments and tell courses they’ve completed.

Go to my.pltw.org to get started.
Continue Your Learning

March 20-23, 2016
Indianapolis, Indiana

www.PLTW.org/PLTWSummit
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