

AweSTEM! 2014



PROJECT LEAD THE WAY

PLTW

PREPARING STUDENTS
FOR THE GLOBAL ECONOMY

Project Lead The Way is the nation's leading provider of STEM programs. PLTW's world-class, activity-, project-, problem-based curriculum and high-quality teacher professional development, combined with an engaged network of partners, help students develop the skills to succeed in our global economy. PLTW's programs include Launch for grades K-5; Gateway for grades 6-8; and Engineering, Biomedical Science, and Computer Science for grades 9-12. See reverse side for program descriptions. **Over 5,000 schools in all 50 states offer PLTW programs, including 50 schools across Massachusetts.** WPI is one of PLTW's 50 affiliate universities and offers Core Training each summer to prepare educators to teach PLTW courses. For more information, visit www.pltw.org.

The following organizations endorse or recognize PLTW as a Best Practice STEM Curriculum:

- Change the Equation recognizes PLTW as one of only four STEM programs ready to be scaled up nationwide
- The Massachusetts Governor's STEM Advisory Council endorses PLTW as one of only seven @Scale Projects that increase the number of students who are both prepared for and interested in STEM-related careers
- American Aerospace Industry Association
- American Society for Engineering Education
- Bayer Foundation includes PLTW as a Best Practice in STEM Education in their *Planting the Seeds for a Diverse U.S. STEM Pipeline: A Compendium of Best Practice K-12 STEM Education Programs*. PLTW is listed on page 64: http://www.bayerus.com/msms/web_docs/Compendium.pdf
- Harvard Graduate School of Education's *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century* cites PLTW as a "model" program for the 21st Century. The citation of PLTW is on page 27: http://www.gse.harvard.edu/news_events/features/2011/Pathways_to_Prosperty_Feb2011.pdf
- National Academy of Sciences and National Academy of Engineering report *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* cites PLTW in the executive summary as the model to use to develop world class standards-based curriculum: http://www.nap.edu/catalog.php?record_id=11463
- Society of Manufacturing Engineers

If you have any questions about PLTW or need more information or assistance, please feel free to contact:

- Carol Malstrom at PLTW, cmalstrom@pltw.org - for questions related to program implementation, curriculum content, PLTW Agreement, PLTW policies, budgeting, equipment/supply requirements, or student scheduling
- Terry Adams at WPI, tadams@wpi.edu - for questions related to core training at WPI, college credit from WPI, or issues specific to MA
- PLTW School Support, schoolsupport@pltw.org or toll free 877-335-7589



WPI

STEM
Education
Center

STEM Education Center
www.wpi.edu/+stem
stemcenter@wpi.edu
508-831-5512

Project Lead The Way engages student learning through four programs:



PLTW Launch

Studies show that students decide as early as elementary school whether they like, and think they are good at, math and science. PLTW Launch is designed to capture students' interest in math and science and spark a lifelong passion. Students use touch technology, robotics, and everyday materials to explore topics such as energy, light and sound, motion and stability, and gravity. Design problems encourage collaboration, analysis, problem solving, and computational thinking. With PLTW Launch, students will leave elementary school with a passion for and confidence in the STEM subjects, ready to continue their learning in middle school, high school, and beyond.



PLTW Gateway

Through topics like robotics, flight and space, and DNA and crime scene analysis, students will find their natural curiosity and imagination engaged in creative problem solving. The Gateway program provides a strong foundation for further STEM learning in high school and beyond, challenging students to solve real-world problems like cleaning oil spills and designing sustainable housing solutions. Using the same advanced software and tools as the world's leading companies, students see the application of math, science, technology, and engineering to their everyday lives.



PLTW Engineering

PLTW's Engineering program provides all students with a track for success, whether they are interested in learning more about engineering, have decided to pursue it as a career, or simply want to learn to think critically, work collaboratively, and explore how math and science work in everyday life. Students engage in open-ended problem solving, learn and apply the engineering design process, and work with the same industry-leading technology and software used by top companies. They investigate topics such as aerodynamics and astronautics, biological engineering and sustainability, and digital electronics and circuit design, giving them an opportunity to learn about various engineering disciplines before beginning post-secondary education or careers.



PLTW Biomedical Science

PLTW's Biomedical Science program is a rigorous and relevant four-course sequence that allows students to play the roles of biomedical professionals as they investigate and study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students engage in activities like investigating the death of a fictional person or dissecting a sheep's heart, learning content in the context of real-world cases. They examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease, all while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future.

MANIKEN® is a registered trademark of Zahourek Systems Inc.

PLTW's fifth program, **PLTW Computer Science**, is under development and is coming soon.