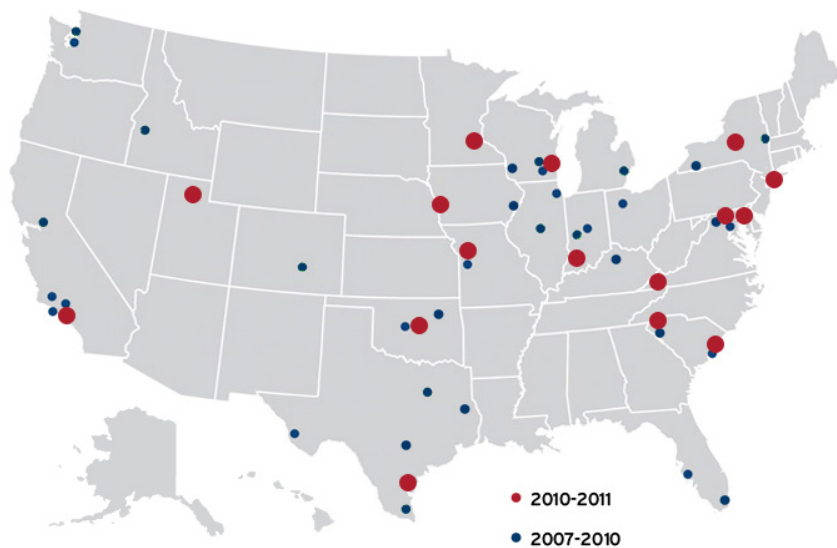


model schools



A model for our schools and a model for STEM education.

The PLTW curricula thrives on three important factors – imagination, innovation and learning. Nowhere is this more evident than in the schools selected to be 2011 PLTW Model Schools. Collectively, they encompass the best that PLTW has to offer to today's middle and high school students. Individually, they represent outstanding examples of how schools can implement PLTW's rigorous STEM education program to meet the unique needs of their own communities. This brochure honors and celebrates the PLTW Model Schools class of 2010-11 by introducing some of the highlights of their inspiring and exemplary programs. It also provides important background on the Model Schools program, including key areas for judging and selection. All of this can help existing PLTW schools, as well as those just getting started, to grow and enhance their own unique PLTW programs.



There are approximately 4,200 PLTW programs within all 50 states and the District of Columbia. Nominated schools were judged against 37 performance indicators, within nine quality categories. A panel of PLTW State Leaders and Affiliate Directors led the evaluation process that was conducted in two stages over a six-week period.

A national footprint of diversity and success.

Today, PLTW programs impact well over 400,000 middle and high school students across the country, making it the nation's leading provider of rigorous STEM education for middle and high school students. One of the main reasons for this outstanding distinction and impressive number of implementations is that the PLTW curriculum and teacher and counselor support services are flexible to address the unique needs of different school environments, diverse student populations, and varied geographic locations. Indeed, you'll find that PLTW Model Schools, including this year's recipients, come in all shapes, sizes, and locations, helping to demonstrate that middle schools and high schools in any state or district across the country can succeed with PLTW.

What does it take to become a PLTW Model School?

Along with a lot of hard work on the part of many dedicated faculty members and administrators, the 2011 PLTW Model Schools embody a set of important qualities and characteristics. Many of these reflect key elements of the performance indicators outlined in PLTW's National Certification application and were used as part of judging and selection criteria. For example, the PLTW program at a number of 2011 Model Schools is at full implementation, and over 25% of the full student population participates in PLTW courses. Partnerships with business, industry, and postsecondary institutions are in place and actively support the curriculum. Many of the Model Schools have developed a robust student recruitment strategy, which often features ongoing coverage of their program by the local media. Professional development is a mainstay of most 2011 Model Schools, with teachers and counselors not only attending PLTW summer training programs, but in some cases, taking an active role in leading them. And all of the Model Schools selected provide their students with the opportunity to work with professionals in STEM fields.

For more information about our Model Schools program and this year's recipients, visit www.pltw.org/model-schools.

2011 PLTW Model Schools



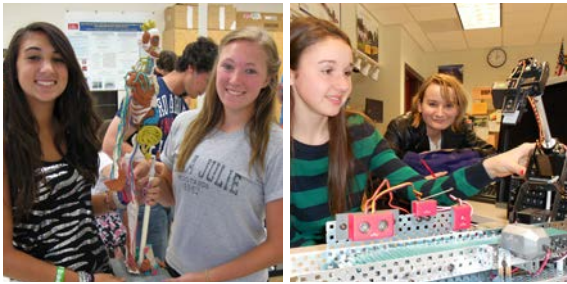
Bel Air High School, Bel Air, MD: Students entering the Biomedical Sciences Program (BMS) as a freshman get a head start at Bel Air High School. The PLTW instructors and current students host a week-long BMS Summer Camp for incoming ninth graders. Held at the high school in the classrooms and labs used in the program, current BMS students act as “counselors” to the soon-to-be PLTW students.

Blue Springs Freshman Center, Blue Springs, MO: Over a four-year period, participation in Blue Spring’s Biomedical Sciences Program has increased over 300%. In the final capstone course, these model students are working with medical professionals to study the effects of energy drinks on athletic performance, changes in diabetic care over the years, and the impact of our cell phones on brain cells.



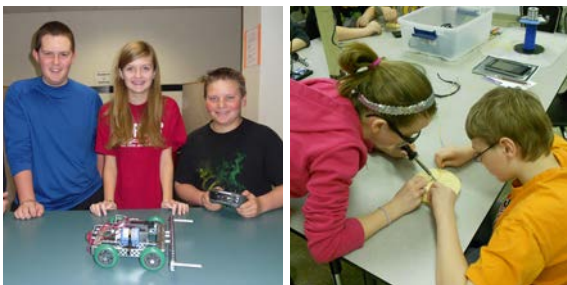
Brooklyn Technical High School, Brooklyn, NY: Students of Brooklyn Technical High School have been focused on science, technology, engineering, and math for over 80 years. With over 4,000 students participating in PLTW, students attend Brooklyn Tech specifically to prepare for careers in the STEM fields.

California Academy of Math and Science, Carson, CA: Recognized by the state of California for its academic achievement, the 400 PLTW students at CAMS are accumulating major awards, including a first place finish at the VEX Pan-Pacific Robotics Championship and second place at the Math Engineering Science Achievement National Competition. Students also benefit from having Engineering Design and Development (EDD) taught by a practicing engineer.



Carroll County Career and Technology Center, Westminster, MD: The Biomedical Sciences and Pathway To Engineering programs at Carroll County are frequently held up as examples at the state’s annual Career and Technical Education Conference. Students who take the courses at CCTC come from eight area high schools and take all the courses during their junior and senior years, allowing courses to be offered at their highest level and rigor.

Cazenovia High School, Cazenovia, NY: Cazenovia High School’s deep connections with the local engineering community are giving students a unique experience. Three volunteer engineers mentor the students through EDD, helping them navigate the course while providing real-world feedback. In 2005, the class started an electric car racing program. Today, over 30 schools across the state come together with the electric cars they’ve designed and built, racing at up to 40 miles per hour.



Central Middle School, Edmond, OK: As a Gateway To Technology (GTT) school, Central Middle School students receive outstanding mentoring from the high school students and instructors at Edmond High School and the Francis Tuttle Pre-Engineering Academy. Teachers in the science, technology, and math departments work collaboratively to incorporate projects across all three curriculums.

Chilhowie Middle School, Chilhowie, VA: Students in Gateway To Technology (GTT) at Chilhowie Middle School are exposed to fun projects like modular house construction, egg crash vehicles, and balsa wood bridges. Through curriculum mapping across the school district, the GTT program has led to increased participation in Principles Of Engineering (POE), Introduction to Engineering Design (IED), and Computer Integrated Manufacturing (CIM) PLTW courses offered at the high school level.



Escuela Vieau School, Milwaukee, WI: Established in 2006, Vieau School’s PLTW Gateway To Technology (GTT) program can boast the 100 percent, full participation of its middle school student body. All 185 students in grades six through eight take the GTT courses, which propel them directly into high school excellence.

Foy H. Moody Science & Health Center Innovation Academy, Corpus Christi, TX: Teachers at Moody’s Innovation Academy take advantage of the school’s location along the Gulf of Mexico. Students are collecting field data at the Laguna Madre Field Research Station, presenting oyster bed research findings at the National Ocean Summit, and constructing underwater robots. PLTW students are constantly integrating real-world activities into the classroom and beyond. The Texas Commissioner of Education recently designated the Innovation Academy as an official state STEM academy.



Lewis Central High School, Council Bluffs, IA: Students at Lewis Central use what they learn through PLTW courses to benefit their community. Last year, students designed and built an outdoor classroom for a local elementary school, doing everything from researching local building codes and the cost of materials, to creating 3D models of their designs using Autodesk® software. The engineering students then led over 200 volunteers in building the outdoor classroom as part of UNO's Seven Days of Service.

Pike Central High School, Petersburg, IN: Biomedical Sciences students at Pike Central started a Biomed Club that meets every other week after school to discuss leading-edge technologies and emerging science. With the help of their PLTW engineering peers, three of whom were selected to attend the White House Science Fair in February 2012, many of their own medical intervention designs have come to life.



Shakopee Junior High School, Shakopee, MN: The support of administrators and staff, along with the school's advisory board and 45 engineers who donate their time and expertise to mentor the students, has helped build an incredible PLTW program at Shakopee Junior High. Teacher T.J. Hendrickson and technology instructor Brad Thorpe started the junior high program with just 83 students in 2007. Today, over 1,620 students are enrolled in PLTW district-wide.

Tamassee-Salem Middle School, Salem, SC: Students at Tamassee-Salem had a rare opportunity this year—piloting the newest unit in the Gateway To Technology (GTT) curriculum, Green Architecture. Through this unit, students are reading architectural scales, drawing and constructing walls, and creating their designed home on Autodesk® software. The students were also first and second place medal winners in the state robotics competitions for the last three years.



Two Rivers High School, Ogden, UT: "Science + Engineering" is Two Rivers High School's approach to introducing ninth graders to the school's PLTW program. After extensive research, the district's PLTW magnet high school decided to include a lab-based physics class for any student taking a PLTW course. The result? Students who are more successful in future PLTW courses, understand the interrelationship of math and science, and earn permanent employment with the school's industry partners upon graduation.

Wando High School, Mt. Pleasant, SC: Wando is home to both biomedical and pre-engineering programs. Since Principles of the Biomedical Sciences began five years ago, enrollment has doubled each year. After petitioning the state, Wando now offers Biomedical Sciences Program (BMS) courses for honors credit. Ten years after starting Pathway To Engineering (PTE), Wando has 425 students enrolled in the curriculum. Students frequently engage in internships with engineering firms in the area and participate in VEX robotics, TARC rockets, bridge design, and statewide IED, DE, and POE competitions.

2011 PLTW Model Schools Facts

For more information about our Model Schools program and this year's recipients, visit www.pltw.org/model-schools.



BEL AIR HIGH SCHOOL - Bel Air, MD

Student Population: 1,642
PLTW Students: 207
PLTW Teachers: 4

PLTW Programs:
– Biomedical Sciences

Colleges Attended By Graduates: Clemson University, Drexel University, Georgia Tech, Hofstra University, James Madison University, Loyola University of Maryland, Penn State, Rutgers University, University of Massachusetts, University of South Carolina

Partnership Team: Johns Hopkins University, Harford Community College, Aberdeen Proving Ground, Edgewood Chemical Biological Center, Upper Chesapeake Health



BLUE SPRINGS FRESHMAN CENTER - Blue Springs, MO

Student Population: 294
PLTW Students: 250
PLTW Teachers: 3

PLTW Programs:
– Biomedical Sciences

Colleges Attended By Graduates: University of Missouri, University of Missouri-Kansas City, Missouri Western University, Northwest Missouri State University, Truman State University, Wichita State University, Brown University, University of Kansas

Partnership Team: Midwest Urology Center, University of Missouri, Research Medical Center, Missouri S&T, St. Luke's Hospital, University of Missouri-Kansas City



BROOKLYN TECHNICAL HIGH SCHOOL - Brooklyn, NY

Student Population: 5,312
PLTW Students: 4,073
PLTW Teachers: 32

PLTW Programs:
– Pathway To Engineering

Colleges Attended By Graduates: Adelphi University, Albany College of Pharmacy, American University, Baruch College (CUNY), Boston University, Brandeis University, Brooklyn College (CUNY), Carnegie Mellon, University of Connecticut, Cornell, Drexel, Fordham, Hofstra, Hunter College (CUNY), Polytechnic Institute of NYU, Rochester Institute of Technology, St. John's University, University at Albany, Stony Brook University

Partnership Team: Brooklyn Technical High School Alumni Foundation, Rochester Institute of Technology, Pennoni Associates Inc. Consulting Engineers, Mancini Duffy, Con Edison, National Grid-Engineering Our Future



CALIFORNIA ACADEMY OF MATH AND SCIENCE - Carson, CA

Student Population: 660
PLTW Students: 400
PLTW Teachers: 5

PLTW Programs:
– Pathway To Engineering

Colleges Attended By Graduates: Cal State University Long Beach, Cal Poly San Luis Obispo, UC Berkeley, UC Davis, UC Irvine, UCLA, UC San Diego, UC Santa Barbara, UC Santa Cruz, Harvard University, Massachusetts Institute of Technology, Stanford, University of Southern California

Partnership Team: Boeing, Northrop Grumman, Raytheon, El Camino College, Cal State University Dominguez Hills



CARROLL COUNTY CAREER AND TECHNOLOGY CENTER - Westminster, MD

Student Population: 1,252
PLTW Students: 196
PLTW Teachers: 4

PLTW Programs:
– Pathway To Engineering
– Biomedical Sciences

Colleges Attended By Graduates: Massachusetts Institute of Technology, Cornell University, Princeton, University of Maryland, Virginia Tech, Penn State, Clemson University, Georgia Tech, Rochester Institute of Technology, Embry-Riddle, Air Force Academy

Partnership Team: Northrop Grumman, intelliTECH Liquid Packaging, Whiting-Turner Contracting, RMF Engineering, Carroll County CC, AECOM, SUEZ Energy, EBA Engineering, MD Department of General Services, JMT, Whitney, Bailey, Cox & Magnani, Howard CC, Design Interface Inc., KCI, Pactiv Corporation, Carroll County Government, Hazen and Sawyer, DeMario Design



CAZENOVIA HIGH SCHOOL - Cazenovia, NY

Student Population: 480
PLTW Students: 105
PLTW Teachers: 4

PLTW Programs:
– Pathway To Engineering

Colleges Attended By Graduates: Rochester Institute of Technology, Rensselaer Polytechnic Institute, Clarkson University, Buffalo State, Cornell University, Syracuse University

Partnership Team: Lockheed Martin, Saab Sensis Corporation, GHD, Pelco Component Technologies, Indiana Springs Manufacturing Co., Inc.



CENTRAL MIDDLE SCHOOL - Edmond, OK

Student Population: 832
PLTW Students: 264
PLTW Teachers: 1

PLTW Programs:
– Gateway To Technology

Partnership Team: Oklahoma Dept. of CareerTech, Oklahoma Science Museum, Francis Tuttle Technology Center, University of Oklahoma, Oklahoma State University, Oklahoma State Dept. of Education, Edmond Public Schools



CHILHOWIE MIDDLE SCHOOL - Chilhowie, VA

Student Population: 300
PLTW Students: 225
PLTW Teachers: 1

PLTW Programs:
– Gateway To Technology

Partnership Team: Bell Helicopter, Recycle West Virginia, Strongwell Corporation, Royal Mouldings Limited, Wytheville Community College, Virginia Highlands Community College



ESCUELA VIEAU - Milwaukee, WI

Student Population: 185
PLTW Students: 185
PLTW Teachers: 1

PLTW Programs:
– Gateway To Technology

Colleges Attended By Graduates: Milwaukee School of Engineering (MSOE), University of Wisconsin-Milwaukee, University of Wisconsin-Madison, Milwaukee Area Technical College (MATC)

Partnership Team: Rockwell Automation



FOY H. MOODY HIGH SCHOOL INNOVATION ACADEMY - Corpus Christi, TX

Student Population: 300
PLTW Students: 300
PLTW Teachers: 5

PLTW Programs:
– Pathway To Engineering

Colleges Attended By Graduates: Texas A&M University-College Station, University of Texas-Austin, Massachusetts Institute of Technology, Texas A&M University-Corpus Christi, Texas A&M University-Kingsville, University of Texas-San Antonio, University of Texas-Arlington

Partnership Team: CITGO Petroleum Corporation, Flint Hills Resources, Valero Energy Corporation, Texas A&M University-Kingsville, Texas A&M University-Corpus Christi, Del Mar College, University of Texas Marine Science Institute



LEWIS CENTRAL HIGH SCHOOL - Council Bluffs, IA

Student Population: 910
PLTW Students: 120
PLTW Teachers: 3

PLTW Programs:
– Pathway To Engineering

Colleges Attended By Graduates: Iowa State University, University of Iowa, Creighton University, University of Nebraska, University of Nebraska at Omaha, Kansas State University, Iowa Western Community College

Partnership Team: Kiewit Building Group, Ellison Technologies Automation, MidAmerican Northern Natural Gas, Emswiler Architecture, Creighton University, Iowa Western Community College



PIKE CENTRAL HIGH SCHOOL - Petersburg, IN

Student Population: 599
PLTW Students: 289
PLTW Teachers: 3

PLTW Programs:
– Biomedical Sciences
– Pathway To Engineering

Colleges Attended By Graduates: University of So. Indiana, Vincennes University, Oakland City University, Indiana University, University of Evansville, Indiana State University, Massachusetts Institute of Technology, Harvard University, Purdue University, New York Polytechnic, Rose-Hulman Institute of Technology, University of Illinois, Clemson University

Partnership Team: Deaconess Clinic, Ivy Tech CC, Memorial Hospital, Pike Co. EMS, Pike Co. Econ. Dev. Corp., Trilogy Health, Eastside Veterinary Clinic, City of Petersburg, Toyota IN, Crane Naval Center, Solar Sources Underground, Four Star Fabricators, Knox Co. ARC, Huntingburg Airport, Kimball Electronics, Jasper Engines, Hydrocarbon Engineering, Indy Power Systems, OFS, Thermwood, Masterbrand



SHAKOPEE JR. HIGH SCHOOL - Shakopee, MN

Student Population: 950
PLTW Students: 240
PLTW Teachers: 2

PLTW Programs:
– Gateway To Technology

Partnership Team: Toro, Tyco Electronics, Seagate, ReiTech, Hennepin Technical College, MNCEME, Minnesota Precision Manufacturing Association, Goodrich, Shakopee Rotary Club, Shakopee Lions Club



TAMASSEE-SALEM MIDDLE SCHOOL - Salem, SC

Student Population: 287
PLTW Students: 109
PLTW Teachers: 1

PLTW Programs:
– Gateway To Technology

Partnership Team: Clemson University, Tri-County Technical College, Sandvik, Itron Manufacturing Engineering, Kauffman Truss Inc.



TWO RIVERS HIGH SCHOOL - Ogden, UT

PLTW Students: 387
PLTW Teachers: 6

PLTW Programs:
– Pathway To Engineering

Colleges Attended By Graduates: Utah State University, Weber State University, Brigham Young University, University of Utah

Partnership Team: Golden State Castings, ATK, Smith Optics, Edge Products, Autoliv Inc., Fresenius Medical Care, JD Machine Corporation, OWATC, Hill Air Force Base, Utah Valley University, Utah State Department, ARW Engineers, International Armoring Corporation



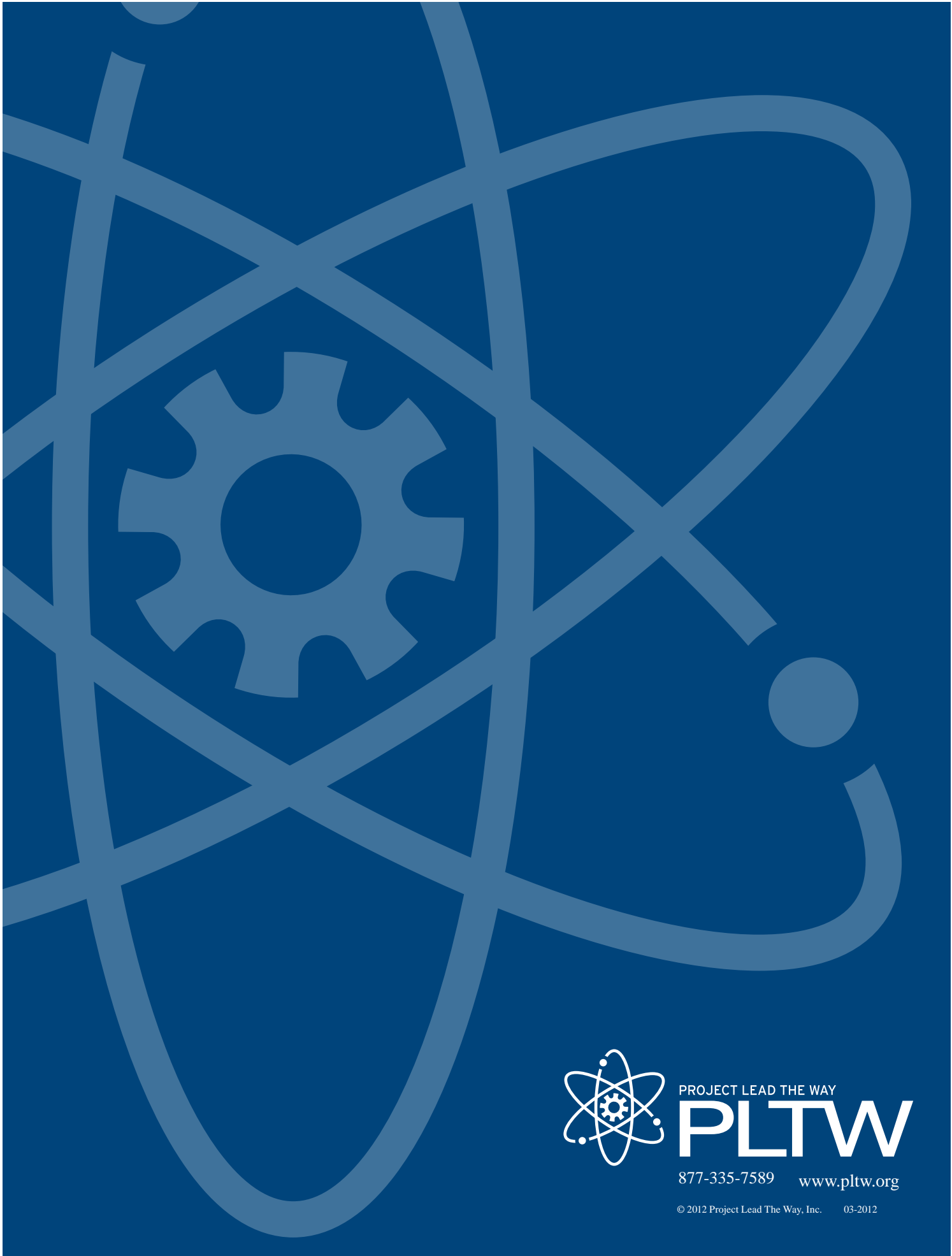
WANDO HIGH SCHOOL - Mt. Pleasant, SC

Student Population: 3,400
PLTW Students: 714
PLTW Teachers: 11

PLTW Programs:
– Biomedical Sciences
– Pathway To Engineering

Colleges Attended By Graduates: Clemson University, University of South Carolina, Georgia Tech, Virginia Tech, Wofford University

Partnership Team: Boeing, SAIC, NOVUS Architects, BP Chemical, Blackbaud, Benefitfocus, Collins Engineers, Trident Technical College, The Citadel Medical University of South Carolina, Roper St. Francis Healthcare, Trident Technical College Health System, Bay Tree Orthodontics, A10 Clinical Solutions, Inc., Intrexon Corporation, East Cooper Medical Center



PROJECT LEAD THE WAY

PLTW

877-335-7589

www.pltw.org

© 2012 Project Lead The Way, Inc. 03-2012