

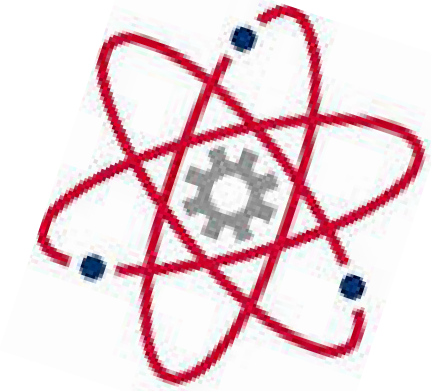
Project Lead The Way: Launch[®] K-5 STEM Initiative

Wheatland-Chili Central School District
Board of Education Presentation
March 24, 2014



PLTW: a K-12 STEM Solution

Project Lead The Way (PLTW) is the nation's leading provider of STEM programs. PLTW's world-class, activity-, project-, and **problem-based curriculum** and **high-quality teacher professional development** model, combined with an engaged network of educators and corporate partners, help **students** develop the **skills** needed to **succeed** in our **global economy**.



PLTW Curriculum

Continuum of Study

- PLTW Launch - K-5
- **PLTW Gateway - 6-8**
- **PLTW Engineering - 9-12**



Course Alignment

- Common Core Standards for Math and English Language Arts
- Next Generation of Science Standards
- Other national and state standards

Current PLTW Course Offerings

- Grade 8 Gateway To Technology-2000
- Design and Drawing for Production (DDP)-2000
- Digital Electronics (DE)-2001
- Computer Integrated Manufacturing (CIM)-2002
- Principles of Engineering (POE)-2002
- Civil Engineering and Architecture (CEA)-2003



Mission of PLTW at Wheatland-Chili

- To introduce students to the basic concepts and applications of **Science, Technology, Engineering and Mathematics (STEM)** through pre-engineering curricula
- Help students develop the technical, intellectual and soft-skills that are necessary to successfully pursue post-secondary engineering and engineering technology programs
- Two Technology Certified Teachers
 - Brett Handley
 - Karl Keydel



PLTW Launch

Kindergarten through fifth-grade students become

- Problem Solvers
- Critical Thinkers
- Risk Takers

Use structured approaches

- Engineering Design Process
- STEM knowledge, skills, and habits of mind
- Inquiry Based Instruction
- Flexible Kits (two per grade level)



Why PLTW Launch K-5

Recent research has recommended that every effort should be made to start as soon as children enter elementary school:

- Develop interests in **STEM identities** and **careers**, especially in female students
- Creates **curiosity** and **creativity** through **hands-on** learning
- Become **collaborative** while engaged in **problem-solving**
- Extend **reasoning skills** while understanding **multi-steps**



PLTW Launch Site Visitation

- March 6, 2014
- Saratoga Springs Elementary School
- (K-5)
- Only Pilot School in Northeast

WCCSD Representatives

- Pauline Emelson
- Brett Handley
- Jennifer Sinsebox
- Margaret Wright



PLTW Launch Proposal

Two year roll-out

- 2014-15~
Grades K, 2, and 4
 - 2015-16~
Grades 1, 3, and 5
 - Gap opportunities in 6 and 7 science
 - iPad for Technology Integration
- 42 Schools across country piloting the program
 - 1 School in Northeast



2014-2015: Year One

Grade Level	Module Title
Kindergarten	Structure and Function
Kindergarten	Structure and Function: Pushes and Pulls
2 nd Grade	Materials Science: Properties of Matter
2 nd Grade	Materials Science: Form and Function
4 th Grade	Energy: Collisions
4 th Grade	Energy: Conversion



2015-2016: Year Two

Grade Level	Module Title
1 st Grade	Light and Sound
1 st Grade	Light: Observing Earth, Sun, Moon, and Stars
3 rd Grade	Stability and Motion: Forces and Interactions
3 rd Grade	Stability and Motion: Science of Flight
5 th Grade	Robotics and Automation
5 th Grade	Robotics and Automation: Challenge

*Grade 6 and 7 Unit Implementation to avoid gap in instruction

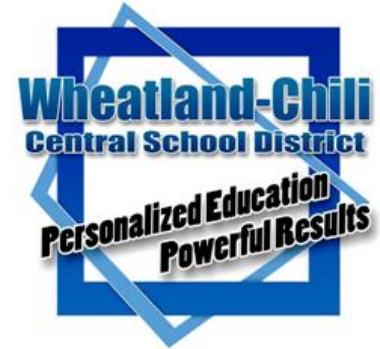


Project Lead the Way in Action



District Next Steps

- K-5 Science Curriculum Review
 - Align NYSED Science Standards
 - Next Generation Science Standards
 - BOCES Elementary Science Program Kits
 - Two PLTW Modules (Kits)
 - Jennifer Sinsebox
 - Pauline Emelson
-
- PLTW Lead Teacher Training, Summer 2014





Current WCCSD Science Curriculum





PLTW Launch Curriculum



THANK YOU

About PLTW Project Lead The Way (PLTW) is a 501(c)(3) nonprofit organization and the nation's leading provider of science, technology, engineering, and math (STEM) programs. PLTW's world-class, activity-, project-, and problem-based curriculum and high-quality teacher professional development model, combined with an engaged network of educators and corporate partners, help students develop the skills needed to succeed in our global economy. More than 5,000 elementary, middle, and high schools in all 50 states and the District of Columbia currently offer PLTW courses to their students. For more information, visit www.pltw.org.

