Project Lead the Way

About the Program

The Project Lead the Way Pathway to Engineering (PTE) is a sequence of courses, which follows a proven hands-on, real-world problem-solving approach to learning. Throughout PTE, students learn and apply the design process, acquire strong teamwork and communication proficiency, and develop organizational, critical-thinking, and problem-solving skills. They discover the answers to questions like how are things made and what processes go into creating products? Students use the same industry-leading 3D design software used by companies like Intel and Lockheed Martin. They explore aerodynamics, astronautics, and space life sciences. Students apply biological and engineering concepts related to biomechanics. They design, test, and actually construct circuits and devices such as smart phones and tablets and work collaboratively on a culminating capstone project. It's STEM education, and it's at the heart of today's high-tech, high-skill global economy.

Course Sequence

- Introduction to Engineering Design
- Engineering Science
- Digital Electronics
- Engineering Design and Development

Career Opportunities

- Aerospace Engineer
- Agricultural Engineer
- Automotive Engineer
- Biomedical Engineer
- Chemical Engineer
- Civil Engineer
- Computer Engineer
- Drafting and Design Engineer
- Electrical Engineer
- Environmental Engineer
- Geological Engineer
- Marine Engineer
- Mechanical Engineer
- Petroleum Engineer
- Software Engineer

Design Process

1. Define the Problem
2. Brainstorm
3. Research & Generate Ideas
4. Identify Criteria & Constraints
5. Explore Possibilities
6. Select an Approach
7. Develop a Design Proposal
8. Model or Prototype
9. Test & Evaluate
10. Refine
11. Create or Make
12. Communicate Results