

Consider an Industry Challenge with: Wayne-Finger Lakes Early College High School

“How can my company partner with W-FLEC Tech to create work-based learning opportunities?”

Overview:

How do Industry Challenges integrate authentic learning and professional skills at W-FL P-TECH?

At NYS Pathways in Technology Early College High Schools (P-TECH), students have the opportunity to engage in Industry/Workplace Challenges – an innovative instructional approach for students to grapple with authentic problems posed by employer partners that require academic, technical, and professional skills with a premium on problem-solving and continuous improvement. The following example, from [Wayne-Finger Lakes P-TECH](#), showcases the power of this instruction to motivate students to improve their skills and understand the relevance of their academic and technical courses while strengthening the partnership with local employers.

The students at Wayne-Finger Lakes P-TECH had the opportunity during the second semester of 2016 to partner with G.W. Lisk (Clifton Springs, NY) on an [advanced level manufacturing project](#). The students were tasked with figuring out the most efficient way to assemble a K15-56 Tube. Each group had to illustrate the current production process and develop a proposal for improvement, including an accurate process flow diagram complete with times, narration and supporting drawings to support their findings.

Twenty-nine freshman students worked directly with representatives from G.W. Lisk towards the following goals:

1. Establish the actual total time to assemble a K15-56 Tube (D15 Operations Process).
2. Identify what is currently happening and develop an accurate process flow diagram complete with times, narration and supporting drawings.
3. Analyze the current process and determine the best stream line.
4. Work in groups to develop an opportunity for improvement (solution).
5. Present opportunities for improvement to G.W. Lisk staff.

The P-TECH, 9-14 model, launched in Brooklyn, New York in 2011. Serving every region and major industry in New York State with 38 schools for fall 2016, it re-imagines the pathway for students to complete their first college degree and step into a middle career. From the first school, PBL has been a critical program element for P-TECH, offering students the opportunity to master professional skills for the workplace while assuring that every student, regardless of their academic preparation, will master rigorous academic and technical skills. As P-TECH scales, school leaders and their employer partners are pushing PBL to a new level that motivates students and generates community support with Industry/Workplace Challenges. These challenges offer students authentic problems to solve, define the relevance of their studies and inspire them with the opportunity to make change.

An Industry/Workplace Challenge is a career preparation activity where small groups of students (4-6 per team) are engaged in solving a problem or a challenge issued by a P-TECH employer in consultation with a P-TECH representative. The structure of the challenge is based in effective project-based learning (PBL) approaches, enhanced by a focus on the targeted career pathway and an authentic problem or issue faced by an employer partner. The students are engaged in career-focused, project-based learning and work as a team over time to identify possible solutions. They then create and deliver a presentation on their solution to the employer.

The challenge or problem is initially identified by the employer collaborating with a P-TECH representative. Typically, the employer will present a number of possible problems or issues that might constitute the challenge and work with a P-TECH representative who helps select and develop a challenge that is a good fit with the current focus in the classroom. Selection also reflects student interests and the availability of resources to support students and teachers in addressing the challenge.

Benefits for Students

Industry/Workplace Challenges are designed to promote:

- The opportunity to develop, practice and demonstrate new skills, including:
 - Identified academic, technical and occupational skills
 - Problem solving and research skills
 - Presentation skills
 - Teamwork skills
- The opportunity to explore and practice in a field of interest
- Student exposure to jobs, careers and working adults
- Enhance the relevance of academic instruction through the application of applied knowledge

The goal of education is not to create exceptional students, but to create exceptional adults with careers that will help them be self-sufficient and contribute to society as a whole while flourishing in their personal lives. Industry/Workplace challenges and PBL provides the experience and training for students to become exceptional and meet the demands of whichever field they choose.

For employers, our students become valuable partners and co-creators. The P-TECH schools they attend emerge as rich resources in the community, offering direct benefits to students and participating companies and long term growth for all.

*Prepared by Emory Roethel, W-FL P-TECH principal with background information on Industry Challenges cited from the "P-TECH Work-Based Learning Toolkit"