Candidate: 28632 | General

Zienty, Valerija

Page: Basic Information

Nominator Information

Please provide your information as the nominator of this partnership.

Your Name

Zienty, Valerija

Email Address

vzienty@mail.worcester.k12.md.us

Title

Teacher

Employer

Worcester Technical High School

Phone Number

4106325050

Your Relationship to the Partnership?

My pre-engineering program partnered with the nominee

The Partners: Business & Industry

Please provide basic information on the business and industry organizations involved in the partnership.

Business/Industry Partner 1

Business/Organization Name

Hardwire, LLC

Address

1947 Clarke Ave
Pocomoke Maryland 21851 US

Website

https://www.hardwirellc.com/

Main Career Clusters within Industry

Manufacturing, Science, Technology, Engineering & Mathematics

Point of Contact

Emily Tunis

Title

President/COO

Email

emily.tunis@hardwirellc.com

Business/Industry Partner 2 (if applicable)

Business/Organization Name

Address

Website

Main Career Clusters within Industry

Point of Contact

Title

Email

Business/Industry Partner 3 (if applicable)

Business/Organization Name

Address

Website

Main Career Clusters within Industry

Point of Contact

Title

Email

vzienty@mail.worcester.k12.md.us

Provide information on any other additional business & industry partners not listed above. Also, please use this opportunity to briefly explain the unique roles of these businesses in the partnership (if there are more than one involved.)

The Partners: Educational Institutions & Programs

Please provide basic information on the educational institutions and/or programs involved in the partnership.

Education Partner 1

Educational Institution/Program Name

Worcester Technical High School/Pre-engineering program

Address

6290 Worcester Hwy
Newark Maryland 21841 US

Website

https://worcestertechhs.com/

What type of institution is it? (If a program, where is it offered?)

High School

Point of Contact

Valerija Zienty

Title

Teacher

Email

vzienty@mail.worcester.k12.md.us

Education Partner 2 (if applicable)

Educational Institution/Program Name

Address

Website

What type of institution is it? (If a program, where is it offered?)

Point of Contact

Title

Email

Education Partner 3 (if applicable)

Educational Institution/Program Name

Address

Website

What type of institution is it? (If a program, where is it offered?)

Point of Contact

Title

Email

Provide information on any other education partners not listed above. Also, please use this opportunity to briefly explain the unique roles of these educational institutions/programs in the partnership (if there are more than one involved.)

Page: Support Information

1. What problem was this partnership developed to solve?

One of the most challenging parts of teaching is developing lessons and projects that give students authentic opportunities to extend and apply what they've learned. Providing students with the opportunity to see how their knowledge can be applied to the real world is central to the mission here at Worcester Technical High School and integral to the philosophies in our pre-engineering program. The main goals of our successful partnership with Hardwire are to improve the quality of student experience, curricular designs, instructor knowledge of industry practices, to develop high quality extensions of the educational experiences for students, and to retain quality employees on the Eastern Shore of Maryland.

2. What steps were taken to get the partnership started?

It all started with "Optimism". I reached out to Hardwire searching for mentors for my students. One of the engineers (now COO of the company) mentored a group of our students on the project called "Optimism". When students were required to know operations of the restaurant in addition to electrical engineering and 3D drafting, she sent them to survey and question local businesses and helped them evaluate results. We stayed in contact, involved local media in the process, and invited Hardwire employees to speak to our students. When Hardwire employees mentor our students, they teach them to think analytically and apply the results of all that thinking without benefit of supervision or experience.

3. Describe how the partnership was designed to support high-quality CTE.

Throughout the past four years, the company has helped us develop curiosity and creativity in my students. When students were working on the project that required them to investigate the inner workings of Port-a-Potty. Employees at Hardwire mentored them during creation of a Port-a-Potty prototype (in 3D and in the shop), helped with modeling and welding flaps, and assisted with writing code for Arduino. Our students embraced the versatility of the engineering mind – using what you know to make; finding out what you don't know and apply it right away; pursuing your curiosity by taking the project further and finding "what happens if…" Another example: our students were given a chance to experience creativity and design process in action when Hardwire employees brought their new military vehicle prototype to our school. The tactical vehicle is currently undergoing testing with the U. S. Army and could be a more mobile, efficient and lighter alternative for protecting troops from explosives in combat zones. Three engineers who worked on the Hardwire concept vehicle came to provide a demonstration at the school, where they discussed the real-world applications of what students are learning in the classroom. In developing the vehicle, Hardwire began with a problem statement, just like our students do in our classrooms. Hardwire tackled the problem using the same kind of reasoning that all engineers, and pre-engineers like ours, are taught to use.

To provide quantitative data: Hardwire judged and mentored capstone project teams for past 4 years; Hardwire participated in middle school "big bash" events; Hardwire were guest speakers at several career exploration events; Hardwire spoke at the event that empowered girls to explore STEM fields; my students (about 15) were either interns or job shadow participants at Hardwire; employees of Hardwire served on PAC for the past 4 years.

4. What were the results of the partnership? What was innovative about the partnership or its output? How did it benefit students and the community?

Student achievement. Knowledge of and immersion in industry practices improved students' awareness of their intended career field. Internships and field experiences extended the amount of time students engage in the field of study improving their performance on related elements of their school curriculum. Student excitement increased when the materials and objects of study increased in scale and relevance. Students gained new members in their personal network of industry professionals which they could access to help guide their own career decision making and design of their curricular projects.
Our school. In a very real sense all the above listed improvements to student achievement also improve the school. Beyond that, positive public media coverage of the partnership has led to increased opportunities for our school in recruiting students, in securing additional industry partners, and being organizationally open to more community collaboration in other venues and curricular avenues.
Our industry partner. Hardwire gained access to students within the community who are studying skills for which they routinely hire practitioners. It is important to note that because of the post-secondary educational demands of this career field this is by no means an immediate benefit, but within four to six years after high school students will be returning to the community as fully educated professionals.

5. What were the lessons learned during the process of building the partnership? What would you have done differently?

Organizations are shifting from a hierarchical, top-down structure to a network of teams. What's more, thanks to technology, the internet, globalization and mobility, employees may be working with team members they've never met. In the ever-changing, complex environment of today's workplace, employees will be valued because they are skilled collaborators who are able to communicate using multiple platforms, keep up with the flow of information, and accept the responsibility that comes with collaboration in both physical and virtual spaces. Although right now Hardwire employees make it easy for not-so-cosmopolitan students to develop relationships with professionals, I would have concentrated on the communication and collaboration aspect of engineering field from the beginning to emphasize the need to develop those skills to my students.

6. Is this partnership sustainable? How do you anticipate it will change in the coming year(s)?

Curiosity requires a willingness to explore new experiences, take risks and the desire and ability to reflect on those experiences. Our collaboration is an example of giving kids a practical vision for what they're learning in the classroom and showing them where their curiosity and creativity can lead. Employees and owners of Hardwire keep open lines of communication, volunteer at various school events and are enthusiastic supporters of CTE education. Our partnership will continue evolve by letting my students "try on their future" at their workplace that is constantly changing based on industry needs and remains "futuristic" to my students.

7. How long did it take to create this partnership?

Less than 6 months

8. How large of an investment did the businesses and other partner(s) involved make in this partnership (time and money)?

Hardwire employees judged and mentored capstone project teams for past 4 years - weekly meeting with my students, materials and machinery to make prototypes, 4 hours each January to judge the capstone presentation.
Hardwire participated in middle school "big bash" events - annual participation in August
Hardwire were guest speakers at several career exploration events - two or three events annually
Hardwire spoke at the event that empowered girls to explore STEM fields - once
my students (about 15) were either interns or job shadow participants at Hardwire - 10 weeks summer internships.
employees of Hardwire served on the Program Advisory Committee for the past 4 years - bi-annual 2-3 hour meetings

9. Would you or an associate be willing to present a session at an ACTE event about this partnership?

Yes