Avonworth School District & Arconic Education Corporation Partnership

February 27, 2019
Avonworth School District Story

What Resonated with us in 6 Words

Human capital needed for technological innovation!

A little bit about Avonworth and how we see our partnership with Arconic influencing our students!

**Avonworth Personal Pathways**
- Pathway for Innovative Arts & Communications
- Pathway for Business, Finance & Entrepreneurship
- Pathway for Health & Medicine
- Pathway for Public and International Relations
- Pathway for Science Technology, Engineering & Mathematics
Learned / Resonated / Actions

- STEM Jobs Increased 2010-2020: all jobs 14%; math 16%; computer systems analysis 22%; software developers 32%; medical scientists 36%; biomedical engineers 62%
- 5 key competencies that are the hallmark of 21st Century Learning
- The Main Principles to drive STEM education
  - Principle 3: STEM education should serve as a bridge to STEM careers.

Avonworth Actions:
- Expanding our Computer Science /STEM Pathway
- Creating opportunities for exposure to STEM related course in the middle school rotations
- More strategic career exposure/introduction in middle school years
- Exploring graduation requirements
Corporate Visit Takeaways

Arconic:
- High level of expertise
- Importance of individual roles/disciplines
- Dependence of each other on Arconic teams for overall problem-solving
- Variety of careers at Arconic

Avonworth Classrooms:
- Many connections were made to our learning outcomes
- Project-based Learning
- Integrated Classes
Teacher Surveys: Important Takeaways

Regular STEM instruction from related-field teachers; some additional exposure through non-STEM related Pathways

Students show a preference for hands-on lessons with practical applications

Most of them see a benefit from working with corporate partners, especially in a fairly intensive push-in scenario (i.e. day long activities, student access over time) for both career preparation and curricular support.

The best partnerships would be reliable, ongoing, allow for in-school and on-site interactions, and include lots of dialogue surrounding planning
Middle School Student Surveys: Access to STEM professionals

Could you benefit from having access to a professional working in the STEM field?

- Yes: 37.1%
- Maybe: 48.6%
- No: 14.3%
Middle School Student Surveys: Access to STEM professionals

What do you think a STEM professional could do for you?

- Career Guidance: 33.3%
- Academic Planning: 36.8%
- Curricular Insight: 26.3%
- I don't know: 3.5%
High School Student Surveys: Access to STEM professionals

What do you think a STEM professional could do for you?

- Curricular Insights: 33.3%
- Career Guidance: 33.3%
- Academic Planning: 33.3%
High School Student Surveys: STEM careers

What kind of STEM-related careers are you interested in?

[Bar chart with categories such as Cyber security, Engineering, Aerospace Engineering, Biomedical Engineering, Industrial Engineering, Civil Engineering, Mechanical Engineering, Engineering Management, Supply Chain Management, Integrated Engineering, Marine Engineering, with Engineering having the highest interest and other categories having lower interest values.]
Partnership Focus Moving Forward

Focus on CEW Standards:

- 13.1 Career Awareness & Preparation
- 13.2 Career Acquisition
- 13.3 Career Retention & Advancement

Acronic Strengths to Bring to Avonworth:

- Women in Engineering
- Next Generation STEM Professionals
- Variety of Careers at Arconic
- Application of STEM Disciplines on Arconic Teams
Partnership Plan Moving Forward

2019-2019 School Year

● Fall
  ○ Middle School Focus
  ○ Design Challenge
  ○ Design Challenge Feedback
  ○ Career Panel Discussion

● Spring
  ○ High School Focus
  ○ STEM Pathway Students (open to others)
  ○ Arconic Keynote Speaker
  ○ Career Panel Discussion
Thank You ECP & Aronic!

An increase in Avonworth student understanding, interest, and pursuit of STEM careers!