



Manufacturing Externship – Application in the Home School Acknowledgement*

1. Educator Name: Brian McNamara
2. School District and School: Bloomsburg Area Secondary Complex
3. Date(s) of Manufacturing Unit: March 1st and March 3rd 2021
4. Length of lesson or unit: 1 HR and 25 Minutes
5. Number of students: 45
6. Grade level of students: 10th

Description of Activity:

1. Talked about Planning for the Future and how the Manufacturing Industry plays a role in our every day life. We discussed how Product ideas are thought of, created, designed and produced.
2. The varying Careers that can be obtained in the Manufacturing Industry and their pay level was discussed. Also tied into this was the multiple points of entry for these jobs. (Varying levels of Diplomas, Certificates and Advanced Degrees).
3. Discussed Specific Local Manufacturing Plants and what they produce and some of the jobs that are available. Challenged students to think about the product and career opportunities available when they drive past them or hear their names. (These “Factories” are more than just a building).
4. Completed Career Lessons in Xello Student Accounts involving student work values and lifestyle and cost.
5. Presented opportunities that Bloomsburg High Students have with working with our local Post-Secondary Partners and the specific opportunity they have to attend the local Community College as a Junior or Senior working towards diplomas, certificates and advanced degrees in a more “Hands on Environment”.
6. Completed a Google Form Survey asking if students were interested in learning more about our partnerships with the Local Community College where students can attend Campus as a Junior or Senior working towards diplomas, certificates and advanced degrees in a more “Hands on Environment”.

What elements from your Manufacturing Externship were used in the preparation or delivery of the unit? (i.e. robot, PPTs provided, information gathered from discussions or tours, etc.)

1. Information gathered from Manufacturing Tours (virtual and in-person)
2. Information that I learned naturally by building our robot project from start to finish.
3. Information gathered from Discussions and Lectures about Career Opportunities, Salaries and the Job Market.
4. Youtube Video- “Success in the New Economy-FutureBuilt”
 - a. <https://www.youtube.com/watch?v=bauDp4NdPK8>
5. Youtube Video-“Path to Careers-The Truth about Manufacturing Careers” (CPWDC)
 - a. https://www.youtube.com/watch?v=kZl_36-fFTo
6. Penn College Website and Programming Links
 - a. <https://www.pct.edu/academics/et>

The Manufacturing Externship program at Penn College was supported by the National Science Foundation under Grant No. 1902379.

How were students engaged with the unit? What hands-on activities occurred?

1. Students watched video clips and then discussions were had involving the many different career opportunities that are available in the Manufacturing Industry. Since the "Path to Careers" video highlighted local Manufacturing Businesses, we discussed the various Companies that are located around us. Students were challenged to Consider the Career Opportunities with these Companies. (This was also a great way to help raise awareness about Specific Regional Manufactures).
2. Students were shown various websites of training programs they could attend as High School Students or after Graduation that would help them become more skilled in this area.
3. Students completed their Career Lessons on their Xello accounts which would help them realize that there is more than one way to be a success in life. Lessons on "Work Values" and "Lifestyle and Costs" helped broaden student perspectives on potential Careers for them.

Explain connections that were created/discussed between manufacturing careers and higher education.

1. We discussed Careers in Manufacturing requiring High School Diploma's as well as careers that would require advanced degrees. Salaries were also discussed.
2. Students were shown websites of training programs they could attend as High School Students or after Graduation that would help them become more skilled in this area.
3. We discussed paying attention to cost vs benefit when it comes post-secondary degrees. Student Debt vs Employability and Potential Salaries were discussed.

How did students respond to the unit?

1. Students were attentive and interested to learn about other opportunities out there.
2. Students who were aware of Local Manufactures were excited to talk about them.
3. Students were surprised to hear about some of the careers that are available in Manufacturing Industry.

Were parents involved or aware of the unit? What was their response to the activities?

1. Parents were not involved or aware of this activity related to Manufacturing. Parents are made aware of our Post-Secondary Partnerships during programing presentations and the opportunities that allow for students to attend Training at various sites as a Junior/Senior.

*A goal of this program is to make advanced manufacturing education and information available to high school students. As such, Penn College is attempting to build a repository of activities that can be used across the K-12 environment. In the subsequent pages, please provide additional information on the lesson/units you implemented so that others can implement similar activities in their classrooms. Please be sure to include any material lists, photos/evidence of student work (not of student participants), and any other relevant information required to implement in another school.*By submitting this form, you acknowledge all information is accurate and correct to the best of your knowledge and you agree to the sharing of this information via publicly accessible websites.*