



Manufacturing Externship – Application in the Home School Acknowledgement*

1. Educator Name: Clark Sarge
2. School District and School: Williamsport Area School District/High School
3. Date(s) of Manufacturing Unit: May 25-May 27
4. Length of lesson or unit: 2.5 days
5. Number of students: 25
6. Grade level of students: 9th grade

Description of Activity:

Exploration of Careers and skills in Advanced Manufacturing. Students were introduced to exciting careers with central PA manufacturing companies. Students were introduced to advanced manufacturing skills including the design process, 3D modeling and additive manufacturing, and precision machining.

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.)

We utilized the information from tours and discussions, the Autodesk inventor lesson, and the externship robot.

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

Students were engaged with a video on local careers in manufacturing. Students were exposed to all levels of manufacturing careers, from operator jobs that required high school education, to maintenance technicians that required one to two years of post secondary education/training, to industrial engineers with 4-year bachelors degrees. Students did hands on measurement and design activities, and were introduced to machining on a lathe.

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

Students explored the connections between careers and education/training. They were also exposed to how parts/products go from idea to reality with a lesson on the design process and 3D modeling and manufacturing.

How did students respond to the unit?

Student responses were very positive. Over 90% said it gave them a better and more positive attitude towards manufacturing careers.

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

Parents were not involved at this time, however we are planning to expand the program next year to bring in parents for more community engagement.

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.