



NDT Externship – Application in the Home School Acknowledgement*

1. Educator Name: **Stephanie Mader**
2. School District and School: **Dauphin County Technical School**
3. Date(s) of NDT Unit: **June during Career Camp**
4. Length of lesson or unit: **78 minutes**
5. Number of students: **100**
6. Grade level of students: **7th-8th grade**

Description of Activity:

Middle school students visit our school for career camp. During this time, they tour our programs and learn about career and technical education. Students will be introduced to NDT using a Google Slides presentation I created with information and photos gathered from my summer externship. This presentation is just a quick overview of all the methods. At the conclusion of the presentation, students will be given the opportunity to practice two types of NDT testing.

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

The elements of my NDT externship that were most useful in the preparation of this lesson were the days spent in the lab learning how to perform PT and MT.

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

Prior to attending the presentation, students will be given a tour of our Welding Technology program. During this tour they will learn how to weld. At the end of the Google Slides presentation, students will be given the opportunity to practice Dye Penetrant and Magnetic Particle testing. Then they will take a tour of our Engineering and Machining Design program.

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

The Google Slide ends with a presentation of the Lycoming tour and a description of Aviation Maintenance Technician program at Pennsylvania College of Technology. Information from the U.S. Bureau of Labor Statistics for Aircraft and Avionics Equipment Mechanics and Technicians is included emphasizing the employment projection and median salary from 2022.

How did students respond to the unit?

This material is based upon work supported by the [National Science Foundation under Grant No. 20000831](#). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Unfortunately, I am not able to answer this question yet as I am planning to deliver this lesson later this year.

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

A brochure will be given to students outlining information given in the presentation for students to share with parents.

A goal of this program is to make NDT 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.