



NDT Externship – Application in the Home School Acknowledgement*

1. **Educator Name:** Justin Weaver
2. **School District and School:** West Shore School District, Cedar Cliff High School
3. **Date(s) of NDT Unit:** Various (One class was held on February 12, and one was held on March 6.
4. **Length of lesson or unit:** approx. 40 minutes
5. **Number of students:** 43
6. **Grade level of students:** 9-12

Description of Activity:

This is a Nearpod—a set of activities designed to be either instructor curate or as a student-paced lesson. Since we do not have NDT equipment, I thought an introduction would be the most useful thing to create. If you remember, I am not a welding or metal tech teacher. Our Metal tech teachers were not very comfortable with the material, so hopefully this serves as a tool for them to get the basics from as well.

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.)

My lab experiences and general knowledge gained in classes was primarily used. The importance of the field was emphasized when we visited Lycoming Engines.

How were students engaged with the unit? What hands-on activities occurred? The kids who took part were metal-tech kids who all have experience in welding and metal fabrication. This lesson did not incorporate any lab activities, though since we lack any NDT materials. I actually think it should be a unit instead of a lesson, and this lesson would serve as the lead in.

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

In one of the videos, I incorporated into the lesson (a Penn College video), the Lycoming engine plant is highlighted.

How did students respond to the unit? I think it was well recieved. The sequence of activities could have been punctuated with small hands-on activities to keep it fresh—like a penetrant lab. I think judging by the questions and side-bars, the kids were interested.

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Were parents involved or aware of the unit? What was their response to the activities? No

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.

ADDITIONAL INFO

Nearpod is a teaching tool that your school district may have the license for. Regardless, this link will give you access to the nearpod:

https://app.nearpod.com/?pin=893E4DA663CE7BC594169663EAC397EE-1&&utm_source=link

If you need other forms of access, email me at jweaver@wssd.k12.pa.us

Below you will find a list of the videos I embedded in the nearpod

Penn College video

<https://www.youtube.com/watch?v=3jWMieu0aXw>

Liquid penetrant testing

<https://www.youtube.com/watch?v=xEK-c1pkTUI>

Non destructive testing in F1

<https://www.youtube.com/watch?v=KxloHKdXPaw>

Non Destructive mag particle

<https://www.youtube.com/watch?v=93sRATwdHo4>