Course: Metalworking **Unit #/ Unit Name: Unit #1 – Safety**	**Year of Implementation: 2019-2020**

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Stage One - Desired Results

Link(s) to New Jersey Student Learning Standards for this course:

https://www.state.nj.us/education/cccs/2014/tech/82.pdf

https://www.state.nj.us/education/aps/cccs/career/

https://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf

Unit Standards:
8.2 Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.

G. The Designed World: The designed world is the product of a design process that provides the means to convert resources into products and systems.

8.2.12.G.1: Analyze the interactions among various technologies and collaborate to create a product or system demonstrating their interactivity.

9.1 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

9.3.MN-PRO.2 - Manage safe and healthy production working conditions and environmental risks.

Transfer Goal(s): Students will be able to independently use their learning to…

Students will be able to independently use their learning to operate tools, machines, and recognize hazards within a metalworking facility.

Enduring Understandings	*Essential Questions*
Students will understand that. . . EU1 the implementation of proper safety procedures will minimize potential hazards.	EU1 ● Why is safety important? ● How does behavior affect safety? ● How does the maintenance of tools and machines impact safety? ● How does classroom environment influence safety? ● How can a hazardous situation in the classroom be safely resolved?
Knowledge Students will know. . . EU1 ● proper classroom expectations (attire, behavior, procedures, etc.). ● the form, function, and safe application of hand tools and power tools. ● the form, function, and safe application of electricity.	*Skills* Students will be able to. . . EU1 ● demonstrate proper general lab safety. ● demonstrate the proper safety, form and function of hand tools and power tools. ● select the appropriate tool for a required task. ● identify unsafe conditions and carry out appropriate corrective measures.

Stage Two - Assessment

Other Evidence:

- Quiz/Test on hand tools, power tools, general lab safety, and electricity
- Students demonstrate setup, safety, and operation of hand/power tools
- Student presentations on safety, form and function of hand/power tools
- Group discussions on proper safety practices

Stage Three - Instruction

Learning Plan: **Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer.**

- Teacher led discussions and demonstrations on safety and hand/power tool/electricity usage. (A) (EU1)
- Read materials on the proper use and safe practices for handling electronics. (A) (EU1)
- Practice new skill-sets on hand, power tools, and electronics. (M) (EU1)
- Student presentations and modeling of hand/power tool/electricity usage throughout the year. (M,T) (EU1)
- Develop a safety individual safety poster that will placed in the room for each student as a reference during the entire school the year. (M,T) (EU1)