

Northern York County School District

Curriculum Overview

Course: Material Tech - Wood		
Grade Level: 9-12		
Approval Date: March 2023	Length of Time: 90 days / 0.5 credits	
Course Description:		
This course is the pre-requisite for all other wood shop courses. Material Tech – Wood is an		
introductory course for woodworking. Students will spend half a year learning about the wood		
shop, machine and tool safety, measuring, technical drawing, different species of wood, and		
wood processing. The course will stress the following: tool identification, machine parts, problem		
solving, reading and drawing project plans and layout work. Students will have the opportunity to		
work on individual projects and partner projects throughout the course. Students will need to		
complete several projects before designing and creating own project.		
Course Objectives:		
 Students will identify tools and machines 		
 Students will understand and apply shop, machine, and tool safety 		
 Students will read a tape measure and steel ruler up to 1/16th of an inch 		
 Students will develop an understanding of the design process 		
 Students will read and draw technical project plans 		
 Students will identify wood species 		
 Students will be introduced to the Manufacturing Process & CNC Machine 		
 Students will be introduced to Wood Joinery & Furniture Design 		
Related Standards:		
Pennsylvania Academic Standards		
 Apply scale as a way of relating concepts and ideas to one another by some measure 		
 Identify and safety use a variety of tools, basic machines, materials and techniques to solve 		
problems and answer questions		
 Apply appropriate apparatus to examine a variety of objects and processes 		
 Identify and apply the technological design process to solve problems 		
Pennsylvania Technology & Engineering Standards		
Design Thinking in Technology and Engineering Education		
 Implement and critique principles, elements, and factors of design 		
Refine design solutions to address criteria and constraints.		
Units:		
1. Introduction to Measurement		
2. Introduction to Shop and Machine Safety		
Introduction to Technical Drawing & Project Planning		
4. Introduction to Wood Design Process		
5. Introduction to Manufacturing & Computer Numerical Control (CNC)		
6. Introduction to Furniture Making		
Concepts:	Competencies:	
 Shop and machine safety 		

 Tool and machine identification and use Measuring using a tape measure or steel ruler Read project plans Create technical drawings for projects Create a project from project plans Problem solving Furniture design Manufacturing design process Career Retention and Advancement: cooperation & teamwork, group interaction, budgeting, and time management 	 Students will be following safety procedures daily mandated by the state of Pennsylvania Students will be able to measure up to 1/16th of an inch Students will be able to operate machines and tools in the woodshop Students will be able to identify different machine parts Students will be able to identify different species of wood Students will read and create technical drawings for the assigned projects Students will work together to solve problems throughout the course. Students will complete an intro-based assembly line project with the manufacturing process Students will learn about joinery and create a small furniture-based project
Learning Activities:	Performance Tasks:
Teacher demonstration	Safety quizzes
Peer leaching	Project finishing Togeber assigned projects
Partner Projects	 Teacher assigned projects Student generated projects
Individual Projects	differentiated by student
Project Videos	achievement levels
Iechnical Drawing	
Other Assessment Measures: Self-reflection Peer review Project rubrics	
Textbook/Primary Resource:	
None	
Supplemental Resource Materials: YouTube & Woodworking Texts & Instructional Material	