Rumson-Fair Haven Regional High School Curriculum

Course: *Traditional Woodworking*
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Section I: Course Description

Traditional Woodworking is a second level program for the student who has successfully completed Woods Technology 1. The students will learn through lectures, demonstrations as well as hands-on assignments. Some of the skills that they will gain through the completion of this course are the basic steps associated with design, how to properly conduct project research and development, problem-solving assembly methods and the correct finishing techniques. They will also learn the proper and safe operation of a variety of hand, power, and machine processes. Projects include: a toolbox, a shaker candle box, a three-legged stool and a carving project.

Section II: NJSLS: New Jersey Student Learning Standards/Learning Objectives

1. ***2020 New Jersey Student Learning Standards – Science*:**
   - "Scientific and technological advances have proliferated and now permeate most aspects of life in the 21st century. It is increasingly important that all members of our society develop an understanding of scientific and engineering concepts and processes. Learning how to construct scientific explanations and how to design evidence-based solutions provides students with tools to think critically about personal and societal issues and needs. Students can then contribute meaningfully to decision-making processes, such as discussions about climate change, new approaches to health care, and innovative solutions to local and global problems."
2. ***2016 English Language Arts Companions for Grades 11-12:***
   - The ELA Standards were revised in 2016, with the recommendations of teams of teachers, parents, administrators, supervisors and other stakeholders and reflect the strong beliefs that, "...Literacy must be recognized and guided in content areas so that students recognize the academic vocabulary, media representations, and power of language inherent in the work of scholars and experts..."
3. ***Standard 8.1 (Computer Science) and 8.2 (Design Thinking)* of the *2020 NJSLS:***
   - "The 'Intent and Spirit of the Computer Science and Design Thinking Standards' is to focus on deep understanding of concepts that enable students to think critically and systematically about leveraging technology to solve local and global issues. Authentic learning experiences that enable students to apply content knowledge, integrate concepts across disciplines, develop computational thinking skills, acquire and incorporate varied perspectives, and communicate with diverse audiences about the use and effects of computing prepares New Jersey students for college and careers."
4. ***2020 Career Readiness, Life Literacies, and Key Skills Standards (9.2 and 9.4):***
   - "Rapid advancements in technology and subsequent changes in the economy have created opportunities for individuals to compete and connect on a global scale. In this increasingly diverse and complex world, the successful entrepreneur or employee must not only possess the requisite education for specific industry pathways but also employability skills necessary to collaborate with others and manage resources effectively in order to establish and maintain stability and independence. This document outlines concepts and skills necessary for New Jersey's students to thrive in an ever-changing world. Intended for integration throughout all K–12 academic and technical content areas, the New Jersey Student Learning Standards- Career Readiness, Life Literacies, and Key Skills (NJSLS-CLKS) provides the framework for students to learn the concepts, skills, and practices essential to the successful navigation of career exploration and preparation, personal finances and digital literacy."
     Climate Change: The state of New Jersey has mandated instruction in, "Climate Change across all content areas, leveraging the passion students have shown for this critical issue and providing them opportunities to develop a deep understanding of the science behind the changes and to explore the solutions our world desperately needs."
5. ***LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35:***
   - A transformative approach to the inclusion of lessons and resources/texts on the contributions and issues concerning the LGBTQ+ population and people with disabilities will be implemented across all core subjects in accordance with state law: "A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A.18A:35-4.36). A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35."
6. **Acquisition/development/refinement of the higher-order critical thinking skills aligned with the *Revised Bloom's Taxonomy of Cognitive Objectives***

Section III: Curriculum Modifications

The *Traditional Woodworking* Curriculum is subject to case-by-case modifications to support/advance the needs of all students, including special education students, English language learners, gifted students and those at risk of school failure. These modifications are based on Individualized Learning Programs (IEPs), recommendations made by the district's English Language Learners (ELL) coordinator, feedback from members of the Intervention & Referral Services Team (*I&RS*) for at-risk students, and 504 Plans.

- One on one instruction
- Independent work stations
- Audio resources to complement instruction
- Visual resources to complement instruction
- Extra time on assessments and large scale projects
- Large projects broken into smaller tasks and timelines
- Tiered Instruction
- Individual help during practice
- Verbal and written directions for visual and auditory learners
- Preferential seating
- Spelling not penalized
- Varied supplemental activities
- Assessments delivered orally

Section IV: Preparation for Standardized Testing

Instruction in the *Traditional Woodworking* Curriculum is aligned with the requirements of state and national standardized assessments, including the *NJSLA*, the *ACT*, the *PSAT* and the *SAT*. The *End of Marking Period Assessments* for *Traditional Woodworking* also demonstrate alignment with the aforesaid standardized assessments.

Section V: Curriculum Pacing Guide

Curriculum Pacing Guide	
Course Title: ***Traditional Woodworking***	**Grade Level:** *10th-12th*
Unit I: Wood Lab Overview & General Safety: Tool Overview	Week 1
Unit II: Toolbox	Weeks 2-10
Unit III: Shaker Candle Box	Weeks 11-22
Unit IV: Three-legged Stool	Weeks 23-31
Unit V: Carving Project	Weeks 32-40

Section VI: Primary Texts and Year Long Instructional Resources

The following texts and instructional resources are employed in *Traditional Woodworking*:

- *Common Sense Education*
- Google Classroom

Section VII: Grading Formula and Assessment Modes

Marking period grades in *Traditional Woodworking* are determined via a percentage weighting model. The specific grading categories and weightings of each will be determined prior to the start of each academic year and will be published in the posted/distributed course syllabi.

Section VIII: Unit Templates

The following unit templates have been established for the *Traditional Woodworking* Curriculum by the *Traditional Woodworking* Instructional Team:

Unit I: Woods Lab Overview & General Safety : Tool Overview		
Unit Summary		
Students will complete general safety lectures and test for credit. Students will demonstrate understanding of all safety procedures of the lab. Students will receive an overview of the lab and tools available.		
Standards/Core Ideas/Performance Expectations		
The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Traditional Woodworking:* ● *2020 New Jersey Student Learning Standards: Science* ○ HS-ETS1-1-4 ● *2016 New Jersey Student Learning Standards: English Language Arts Companions for Grades 11-12* ○ NJSLSA.R1-2, 4-5, 7, RST.11-12.1-10, NJSLSA.W4 & 7, WHST.11-12.2, 4, 9 ● *2020 New Jersey Student Learning Standards: Computer Science and Design Thinking* ○ 8.2.12.ED.1,2,4-5, 8.2.12.NT.1-2 ● *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills* ○ 9.2.12.CAP.6, 8, 9.4.12.CI.1-3, 9.4.12.CT.1-2, 9.4.12.DC.7, 9.4.12.TL.1, 3-4		
Unit Essential Questions	**Unit Enduring Understandings**	
● Is the student prepared to work safely? ● Do the students understand basic tool usage and how to use lab equipment? ● Do the students know all safety procedures for the lab?	● Safety begins with familiarity with the class policies and procedures as well as learning the basic aspects of woodworking. ● Tools such as a hand saw, coping saw and drill press all have different, important safety procedures and rules. ● Safety items such as fire extinguishers, washing stations and emergency power shut offs will be identified.	
Evidence of Learning		
Formative Assessment: • Daily performance • Safety performance practicals	**Summative Assessment:** • General safety test • Rough cutting • Coping saw • Drill press	**Resources Needed:** • Woods Tech Lab

Unit II: Toolbox
Unit Summary
Students will successfully complete the toolbox. Students will produce a classic style tool box that is a continuation from *Woods Technology I* and incorporate hand tool techniques into the final product. This project gives the student a useful reservoir to use for the year and teaches them how to manage their materials and projects.
Standards/Core Ideas/Performance Expectations
The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Traditional Woodworking:* ● *2020 New Jersey Student Learning Standards: Science* ○ HS-ETS1-1-4 ● *2016 New Jersey Student Learning Standards: English Language Arts Companions for Grades 11-12* ○ NJSLSA.R1-2, 4-5, 7, RST.11-12.1-10, NJSLSA.W4 & 7, WHST.11-12.2, 4, 9 ● *2020 New Jersey Student Learning Standards: Computer Science and Design Thinking* ○ 8.2.12.ED.1,2,4-5, 8.2.12.NT.1-2 ● *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*

○ 9.2.12.CAP.6, 8, 9.4.12.CI.1-3, 9.4.12.CT.1-2, 9.4.12.DC.7, 9.4.12.TL.1, 3-4

Unit Essential Questions	Unit Enduring Understandings
● How do we successfully complete a woodworking project? ● What is the importance of having your own tools and storage compartment? ● What is a spokeshave? ● Are hand tools as effective?	● One of the first steps in project planning/completion is understanding the necessary procedures to successfully bring a project to completion, including rough sketches, plans and using templates. ● Having your own tools and storage compartment, while keeping them sharp and clean, allows a woodworker to proactively improve upon their craft. ● A spokeshave is the first hand tool used to make a round handle on their toolbox. ● Hand tool possibilities are as effective or more effective than machine tools.

Evidence of Learning		
Formative Assessment: • Performance activities and operation tests • Countersink test	**Summative Assessment:** • Classwork • Demonstrate bandsaw proficiency • Spokeshave test • Duplicating parts list	**Resources Needed:** • Woods Tech Lab

Unit III: Shaker Candle Box

Unit Summary

Students will successfully complete the Shaker candle box. Students will recreate a classic design that will challenge the student to explore the possibilities of hand tool woodworking.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Traditional Woodworking:*

- *2020 New Jersey Student Learning Standards: Science*
  - HS-ETS1-1-4
- *2016 New Jersey Student Learning Standards: English Language Arts Companions for Grades 11-12*
  - NJSLSA.R1-2, 4-5, 7, RST.11-12.1-10, NJSLSA.W4 & 7, WHST.11-12.2, 4, 9
- *2020 New Jersey Student Learning Standards: Computer Science and Design Thinking*
  - 8.2.12.ED.1,2,4-5, 8.2.12.NT.1-2
- *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*
  - 9.2.12.CAP.6, 8, 9.4.12.CI.1-3, 9.4.12.CT.1-2, 9.4.12.DC.7, 9.4.12.TL.1, 3-4

Unit Essential Questions	Unit Enduring Understandings
● How do we successfully complete a woodworking project? ● Why do we use wood joints? ● Is it possible to really woodwork with just hand tools? ● Are hand tools as effective as power tools?	● One of the first steps in project planning/completion is understanding the necessary procedures to successfully bring a project to completion, including rough sketches, plans and using templates. ● Wood joints allow for a streamlined, noninvasive joint compared to fasteners and screws. ● Hand tool working can be accomplished in a small work space with a limited tool offering. ● Hand Tool possibilities are as effective or more effective than machine tools.

Evidence of Learning		
Formative Assessment: • Dovetail Joint test • Finger joint test	**Summative Assessment:** • Quizzes • Tests • Proficiency test of dovetails • Proficiency test of finger joints	**Resources Needed:** • Woods Tech Lab

Unit IV: Three-legged Stool

Unit Summary

Students will successfully complete the three-legged stool. Students will recreate the classic design that all hand tool woodworkers build. This project is not only functional and beautiful, but also challenges the students to learn how to shape, layout and fasten wood using techniques that do not require fasteners.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Traditional Woodworking:*

- *2020 New Jersey Student Learning Standards: Science*
  - HS-ETS1-1-4
- *2016 New Jersey Student Learning Standards: English Language Arts Companions for Grades 11-12*
  - NJSLSA.R1-2, 4-5, 7, RST.11-12.1-10, NJSLSA.W4 & 7, WHST.11-12.2, 4, 9
- *2020 New Jersey Student Learning Standards: Computer Science and Design Thinking*
  - 8.2.12.ED.1,2,4-5, 8.2.12.NT.1-2
- *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*
  - 9.2.12.CAP.6, 8, 9.4.12.CI.1-3, 9.4.12.CT.1-2, 9.4.12.DC.7, 9.4.12.TL.1, 3-4

Unit Essential Questions	Unit Enduring Understandings
● How do we successfully complete a woodworking project? ● Why are grain patterns important? ● What are the mathematical tricks in woodworking? ● Is it possible to build something structurally strong without nails or screws?	● One of the first steps in project planning/completion is understanding the necessary procedures to successfully bring a project to completion, including rough sketches, plans and using templates. ● Material selection and various grain pattern choices are very important in structural projects as some are more useful in particular situations. ● There are easier ways to incorporate mathematical strategies in hand tool woodworking than using math. ● Students will complete a structurally strong project using no fasteners. We will explore wedges and how they can create very strong projects.

Evidence of Learning

Formative Assessment:	Summative Assessment:	Resources Needed:
• Develop spokeshave control • Understand wedge joints • How to install joints	• Classwork • Tests • Stool built to specific dimensions and tolerances • Use of chisel	• Woods Tech Lab

Unit V: Carving Project

Unit Summary

Students will successfully complete the carving project. Students will explore the art of carving with hand tools. Learning the different styles of tools, their function and how to properly maintain them. Students will recreate two carving samples for credit.

Standards/Core Ideas/Performance Expectations

The state standards outlined below, and established by New Jersey Department of Education, will guide instruction throughout this unit in *Traditional Woodworking:*

- *2020 New Jersey Student Learning Standards: Science*
  - HS-ETS1-1-4
- *2016 New Jersey Student Learning Standards: English Language Arts Companions for Grades 11-12*
  - NJSLSA.R1-2, 4-5, 7, RST.11-12.1-10, NJSLSA.W4 & 7, WHST.11-12.2, 4, 9
- *2020 New Jersey Student Learning Standards: Computer Science and Design Thinking*
  - 8.2.12.ED.1,2,4-5, 8.2.12.NT.1-2
- *2020 New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills*
  - 9.2.12.CAP.6, 8, 9.4.12.CI.1-3, 9.4.12.CT.1-2, 9.4.12.DC.7, 9.4.12.TL.1, 3-4

Unit Essential Questions	Unit Enduring Understandings
● How do we successfully complete a woodworking project? ● What types of hand tool carving is fun and profitable?	● One of the first steps in project planning/completion is understanding the necessary procedures to successfully bring a project to completion, including rough sketches, plans and using templates. ● Understanding the differences between types of carving tools and how they are used is important for successful project completion and proper safety.

● How is spoon and spatula carving considered a specialized form of woodworking? ● How does woodworking become a useful hobby?	● The spoon carving business and community is much larger than we can even imagine and is one of the first introductory pieces for all woodworkers. ● We will learn that it is possible to continue a creative woodworking hobby by obtaining a few tools and developing an understanding of tree species and green woodworking.

Evidence of Learning		
Formative Assessment: • Understand various carving and shaping tools • Exploring craft industry	**Summative Assessment:** • Classwork • Tests • Demonstrated proficiency and safety tests of all carving and shaping tools • Continuity between the two student projects • Developing individual carving style	**Resources Needed:** • Woods Tech Lab

Section IX: Unit Reflection

The *Traditional Woodworking* Instructional Team must confer upon the completion of each instructional unit in the Traditional Woodworking Curriculum and rate the degrees to which the instructional units meet performance criteria established by the New Jersey Department of Education using the Unit Reflection Form. Completed unit reflection forms must be submitted to the Department Supervisor for approval upon completion of curriculum implementation with a complementing list of suggested modifications to the *Traditional Woodworking* Curriculum.

Unit Reflection Form: *(Traditional Woodworking)*			
Lesson Activities:	**Strongly**	**Moderately**	**Weakly**
Foster student use of technology as a tool to develop critical thinking, creativity and innovation skills;			
Are challenging and require higher order thinking and problem-solving skills;			
Allow for student choice;			
Provide scaffolding for acquiring targeted knowledge/skills;			
Integrate modern, global perspectives, especially those regarding diversity, genocide, global issues, and historical ones regarding racial relations;			
Integrate 21st century skills;			
Provide opportunities for interdisciplinary connection and transfer of knowledge and skills;			
Are varied to address different student learning styles and preferences;			
Are differentiated based on student needs;			
Are student-centered with teacher acting as a facilitator and co-learner during the teaching and learning process;			
Provide means for students to demonstrate knowledge and skills and progress in meeting learning goals and objectives;			
Provide opportunities for student reflection and self-assessment;			
Provide data to inform and adjust instruction to better meet the varying needs of learners.			