Woodworking I: Assembly and Finishes

Stage 1 Desired Results

ESTABLISHED GOALS:

Competencies:

- ***Students will demonstrate the ability to safely and properly select, use and maintain equipment, materials, and processes in order to avoid injury and harm.***
- ***Students will demonstrate the ability to effectively plan and complete a project in order to develop a solid work ethic, and to accept individual responsibility.***
- ***Students will demonstrate the ability to apply critical thinking and problem solving in order to meet given expectations.***
- ***Students will demonstrate the ability to analyze and summarize text and integrate knowledge to make meaning of discipline-specific materials.***
- ***Students will demonstrate the ability to produce coherent and supported writing in order to communicate effectively for a range of discipline-specific tasks, purposes, and audiences.***
- ***Students will demonstrate the ability to speak purposefully and effectively by strategically making decisions about content, language use, and discourse style.***

Content Standards

New Hampshire Vocational Curriculum guide

- Standard 1: Students will develop an understanding of the characteristics and scope of technology.
- Standard 2: Students will develop an understanding of the core concepts of technology.
- Standard 8: Students will develop an understanding of the attributes of design.
- Standard 9: Students will develop an understanding of engineering design.
- Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
- Standard 11: Students will develop the abilities to apply the

Transfer

Students will be able to independently use their learning ***to research, plan and complete a project***.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- thorough research will affect the outcome of a project.
- reading and interpreting plans is an important part of the design process.
- accuracy will affect the outcome of a project.
- there are a variety of tools and techniques a woodworker can use to create a desired product.

ESSENTIAL QUESTIONS

- How do different assembly techniques affect the structural integrity of a project?
- What defines “good” surface preparation?

Acquisition

Students will know...

- that problem solving consists of troubleshooting, research and development, and experimentation.
- the importance of reading and understanding plans.
- the specific techniques and equipment associated with:
  - Nailing.
  - Screwing.
  - Plugging.
  - Gluing.
  - Wood Joints.
  - Filing.
  - Planning.
  - Sanding.
  - Staining.

Students will be skilled at…

- using the core concepts of technology.
- utilizing all aspects of problem solving.
- selecting and using energy and power technologies.
- identifying the attributes of design and applying the design process.
- using and maintaining technological products and systems.
- selecting and using manufacturing and construction technologies.
- choosing and executing the appropriate processes for *:*
  - Performing a dry run assembly.
  - Inserting and remove nails.
  - Inserting and removing screws.
  - Plugging a hole.
  - Gluing lumber together.
  - Assembling wood joints.
  - Filing a board or project.

design process. ● Standard 12: Students will develop the abilities to use and maintain technological products and systems. ● Standard 13: Students will develop the abilities to assess the impact of products and systems. ● Standard 19: Students will develop an understanding of and be able to select and use manufacturing technologies ● Standard 20: Students will develop an understanding of and be able to select and use construction technologies.	○ Stain choices. ○ Clear coating. *vocabulary:* board foot, design, layout, crosscut, rip, kerf, bevel, specific tool names, specific joint names, countersink, counter bore, adhesion, adhesive, lamination. Refinishing, glue, sandpaper grit	○ Planing a board. ○ Sanding a board or project. ○ Staining a project. ○ Clear coating a project.

Content Area Literacy Standards	***21st Century Skills***
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. RST.9-10.5 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., *force, friction, reaction force, energy*). WHST.9-10.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. WHST.9-10.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	● *Use and manage information* ● *Apply technology effectively* ● *Be self-directed learners* ● *Interact with others* ● *Solve problems*

Stage 2 - Evidence

Evaluative Criteria	***Assessment Evidence***
	OTHER EVIDENCE:

Stage 3 – Learning Plan

Language Arts Integration	***Mathematics Integration***
● 1.OA.1 Use	● 1.OA.1 Use

Technology Integration	***District Materials***
● 1.OA.1 Use	